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A Healthy Labour Market?
Place, People and Sickness-Related Economic Inactivity in Britain

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Submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy

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For my parents

Abstract

Over the last 30 years, the number of people not in work or looking for work because of long-term sickness or disability in Britain has grown substantially. Between 1981 and 2006, the working-age Incapacity Benefits caseload swelled by 1.72m while those describing themselves as long-term sick or disabled in surveys increased by 1.35m. This thesis investigates this phenomenon of sickness-related economic inactivity (SREI) in Britain across three dimensions: space, people and time. A range of datasets and quantitative analysis are employed to describe and account for the geographical distribution and expansion over time of working-age SREI, across five economic clusters and 64 counties of Britain. Theoretical triangulation is used to organise the evidence on what factors are associated with SREI by place and time. Next, labour market accounts are assembled to describe the dynamics of labour market change (including SREI) between 1981 and 2001 in Prospering Britain, the Conurbations and Industrial Legacy counties and identify factors most strongly associated with withdrawal into SREI outside of Greater London and Rural & Coastal Britain. Two chapters then use a range of datasets, including the British Cohort Study, to describe and account for the geographic distribution and growth in young adult SREI in Britain. The main findings of the thesis are broadly supportive of the 'hidden unemployment' theory advanced by Beatty and Fothergill (1996). Unbalanced employment growth between local labour markets, coupled with persistent inequalities in health and skills and an unsympathetic unemployment benefits system, is likely to account in large part for withdrawal into SREI. The change can also be understood as one aspect of broader polarisation between places and families across Britain, which was only checked between the late 1990s and early 2000s. Policy implications that may prove beneficial to addressing this problem (and preventing its re-occurrence in a new guise) include: a commitment to full employment, through addressing deficits in skills and local labour market demand; renewed action on inequalities in public health; and benefits reforms that both keep the unemployed healthy and support sustained employment.

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Author's Declaration

I declare that none of the work contained within this thesis has been submitted for any other degree at any other university. The contents found herein have been composed by the candidate, Martin Taulbut.

CONTENTS

Chapter 1 Introduction

1.0 Background and rationale

Over the past three decades, the number of working-age people in Britain neither looking for nor available for work because of sickness or disability has increased substantially. Many of them are claiming long-term Incapacity Benefits. This thesis is about this phenomenon of sickness-related economic inactivity (SREI). Some academics have argued that many of these affected by SREI[1] are in fact 'hidden unemployed' and might, with appropriate support and interventions, be drawn back into the labour market (MacKay, 1999; Fothergill and Grieve Smith, 2005; Adams, 2005b). Politicians from all parties now substantially accept this argument (HOC, 2003; DWP, 2006; Smith, 2010). However, explanations differ as to the key determinants of both the historic growth and current geographic distribution of SREI, and what measures might be appropriate to tackle this problem. While some authors put a premium on weaknesses in local labour market demand (Fothergill and Grieve-Smith, 2005; MacKay and Davies, 2008), others place more emphasis on skills or perverse incentives in the benefits system (Bell and Smith, 2004; Faggio and Nickell, 2005). The official view, held by the Treasury and the Department of Work and Pensions, argued that prior to 2007, the economy was at or close to full employment and that lack of jobs was not the core issue (DWP, 2009: 50). This thesis aims to make an original contribution to knowledge on SREI, to understand why it increased over time, why it remains distributed so unevenly across space and to understand how the distribution across the population has altered.

1.1 Sickness-related economic inactivity in Britain: the challenge

The scale of SREI is daunting. In 2006, 1.9m working-age British adults described themselves as long-term sick or disabled while almost 2.5m, or 6.8% of the population, were claiming long-term Incapacity Benefits (IB). In parts of the post-industrial cities of Glasgow, Manchester and Liverpool, and the coalfield towns and villages of South Wales and Northern England, the proportion claiming IB rises to one in five (Groat, 2009). The UK also compares unfavourably on this measure by international standards. Between 1980 and 1995,

[1] See Chapter 3 for a detailed definition.

growth of the IB caseload was among the highest in the OECD (OECD, 2003: 61). By 2007, the proportion of its working–age population claiming incapacity benefits was higher than France, Germany, Italy and the USA and was surpassed only by the Scandinavian counties and the Netherlands (Kemp, 2008: 168). Within this broader change, young adult SREI also increased: between 1981 and 2006, the number of 16-24 years olds claiming long-term IB grew by 88,000. The problem can be stated simply: how and why did growth in SREI occur in Britain, what explains its geographic distribution, and how and why did it affect young adults?

Public policy on SREI is motivated by several factors, including cost containment, benefits reform, public health and the opportunity cost to individuals and the economy. The direct costs of Incapacity Benefits, paid to people who are unable to work because of sickness or disability, stood at £7.7 billion in 2007/08.[2] This was more than three times the total expenditure on unemployment benefits and amounted to 5% of total Government expenditure on Social Security Benefits (Levell et al, 2009). Adding in housing and council tax payments more than doubles this cost to £16 billion (Panorama, 2008). Second, there is evidence of long-standing public concern about the extent of fairness in the benefits system, with fraud and inefficiency seen as widespread (Bamford and Horton, 2009; Hills, 2002). This sits within a broader desire to recast the British welfare state in terms of 'right and responsibilities' (DWP, 2007b; HM Government, 2010). Third, there is a stated desire to improve working-age health. Since 2002, successive policy documents have argued that high employment rates and good population health go together (DWP, 2006; Freud, 2007). Lack of work can be actively damaging to health, whereas decent work can be beneficial to physical and mental health and wellbeing (Waddell and Burton, 2006). This approach was given new backing by the Black Review (2008), which set out *"a new vision for health and work in Britain"* (Black, 2008), emphasising the important role for employers and healthcare professionals in reducing flows into SREI and helping those currently workless back into the workplace. Finally, there is a explicit aim to re-connect the SREI with paid employment. In 2005, the (then) Labour Government set a target to reduce the total number of working age

[2] £6,658m on Incapacity Benefit, £898m on Severe Disability Allowance and a forecast £140m for Employment Support Allowance. Note that these figures exclude benefits paid to people with the most severe disabilities, who are more likely to qualify for Disability Living Allowance.

adults claiming Incapacity Benefit by 1 million by 2015 (DWP, 2007). The Conservatives do not dispute the aim: rather they would argue that there is a lack of ambition to the target and there is need for better support, tougher sanctions and more efficient delivery of welfare-to-work programmes to increase the chances of success (Conservative Party, 2008). Indeed, the new administration has committed to re-assessing all current IB claimants on their readiness to work (HM Government).

1.2 Research question and propositions

The overall aim of the thesis is to answer the following question:

How did working–age and young adult sickness-related economic inactivity change in the British counties over the last 30 years, and what factors can account for these trends?

Sub-questions include:

- How did the scale and demographic of working age and young adult SREI change in the last 30 years in Britain?
- Were different trends in working age and young adult SREI observed for the counties and economic clusters of Britain over this period?
- What are the most plausible reasons for the current distribution of working age and young adult SREI across the counties and economic clusters of Britain?
- What are the most plausible reasons for the growth of working age and young adult SREI over time?
- Did these reasons change over time?

In responding to the research question, the thesis will test a number of key propositions, derived from the literature review. These include:

- There is no evidence of weaker demand for labour (especially unskilled and manual labour) in places with higher current levels, and greater historic growth in, sickness-related economic inactivity.

- Withdrawal into SREI was partly driven by displacement by women returners and competition by local commuters and migrants from elsewhere in Britain.
- Changes in the benefits system can substantially account for growth and local geographic distribution in SREI, especially among women and young adults.
- Administrative estimates tend to overstate more objective measures of population health, exaggerating the health difficulties of those currently classified as SREI.
- Poorer attitudes towards work and learning, along with substance misuse, are the main explanations for growth in young adult SREI, even after other factors are taken into account.

1.3 Thesis structure

The thesis is structured as follows. Chapter 2 reviews the literature on SREI, structured around four organising themes relevant to SREI: labour market demand, health, employability and the benefits system. Chapter 3 provides the methodological approach. It discusses the approach, merits and limitations of triangulation as a research strategy, shows why and how the spatial units (counties and economic clusters) were constructed before summarising the main data sources and surveys used, their strengths and limitations.

Chapters 4-7 sit at the heart of the thesis, with two chapters focusing on the place aspects of SREI and two on the people (young adult) aspects. Chapter 4 provides a stylised description of trends in working-age SREI in the counties and clusters of Britain between 1981 and 2001, before presenting analysis of social and economic data across place and time that may account for these trends. Chapter 5 takes this analysis a stage further by looking at the dynamics of working-age withdrawal into SREI across the counties and economic clusters for the same period and using some simple statistics to test for associations between demographic and employment change, commuter flows and migration and local differences in the growth of SREI. In Chapter 6, national and local trends in young adult SREI are

described, before the personal and labour characteristics of this group relative to young adult Job Seeker's Allowance claimants and the older working-age SREI are discussed. Chapter 7 builds on this analysis to test some detailed structural propositions about the growth in young adult SREI in Britain, before concluding with multiple logistic regression of young adult SREI in Britain using the British Cohort Study 1970.

The final chapter draws together the key findings from this thesis

1.4 Conclusions

Sickness-related economic inactivity is a substantial challenge in Britain, imposing substantial direct and opportunity costs on individuals and the broader economy. If the target of moving one million off SREI and into employment were to be achieved, this would be a major step towards full employment rates and contribute to improving working-age health. Such a goal would also be consistent with the principal of a welfare state founded on 'rights and responsibilities' articulated by both the former Labour government and the new Conservative-Liberal Democrat Coalition (HM Government, 2010; Labour Party, 2010). But to maximise the chances of success in tackling SREI, there is a need to improve our understanding of its changing composition across a number of dimensions. This thesis aims to expand knowledge in this field. In doing so, it will consider whether the growth of SREI in Britain is really consistent with 'a healthy labour market'.

Chapter 2 The growth of sickness-related economic inactivity in Britain: a literature review

2.1 Introduction

The numbers affected by sickness-related economic inactivity (SREI) in Britain are large. As noted in the last chapter, in 2006, between 1.9 and 2.5 million working-age people could be counted in this way (depending on the measure used). What is less apparent from these headline figures is the dramatic growth seen in SREI over time. Between 1981 and 2006, the working-age Incapacity Benefits (IB) caseload swelled by 1.72 million while those describing themselves as long-term sick or disabled in surveys increased by 1.35 million. Moreover, change in SREI was not spread evenly around the country, but was much more concentrated in the older industrial areas of Scotland, Wales and Northern England (Faggio and Nickell, 2005; Beatty et al, 2009b).

This broad conclusion should be tempered by reference to more recent trends. Overall, the stock of working-age IB claimants fell slightly in Britain in the last decade, but this disguises variations by gender and geography. For men, the numbers on IB peaked around 2001 and have fallen steadily since then. In contrast, the female IB caseload did not peak until the mid-2000s and the reduction for Britain as a whole was much less pronounced (Beatty et al, 2009b; McVicar, 2009). Clear geographical differences are also apparent, with the most dramatic falls in large cities such as Glasgow, Liverpool and Manchester and industrial hinterlands such as the former coalfields of South Wales where the concentration of IB claimants is highest (McVicar, 2009; Sissons, 2009; Brown et al, 2010). However, IB rates only began to fall in these areas once local unemployment had fallen to historic lows. This is consistent with the view that a recovery in demand first drew in those on unemployment benefits and then those 'hidden unemployment' on IB (Webster et al, 2010; McVicar, 2009). Much shallower falls were seen in cities like Leeds, Sheffield and Edinburgh, while the IB caseload in some local areas of Southern and Eastern England either remained unchanged or increased very slightly (McVicar, 2009; Sissons, 2009; Brown et al, 2010). As a whole, these changes suggest that IB rates across regions and districts began to converge in Britain in the

2000s, though the evidence of this is more compelling for men than for women (McVicar, 2009; Anyadike-Danes, 2010). Crudely, then, the last decade has seen a small reduction in SREI in Britain, driven almost exclusively by reductions in the male IB caseload in former industrial areas.

Many explanations have been put forward to account for the changes in SREI in Britain, with deindustrialisation and the operation of the welfare state featuring as recurrent themes (OECD, 2003; McCormick, 2000; Bell and Smith, 2004). Although there are similarities to the competing explanations for the emergence of mass unemployment in Britain (see Webster, 2005, on these), the influences on the growth of sickness-related economic inactivity appear broader. A recent review concluded that four factors – national and local labour market demand, the benefits system, the role of health and individual characteristics, including employability – are all essential to deepening understanding of this problem (McVicar, 2008). This chapter will use these aspects, as well as two intermediary explanations, family and neighbourhood effects, as a basic framework for exploring the literature. It begins with labour market demand.

2.2 The growth of sickness-related economic inactivity and labour market demand

In theory, labour market demand appears relevant to determining the balance between unemployed and employed in an economy but not to economic inactivity. In practice, the division between the unemployed and inactive is much more blurred (Yeandle, 2003: 3). At times and in local labour markets where demand is below capacity, there is greater competition for every available vacancy. The low-skilled and least healthy are among the most vulnerable to unemployment in a downturn, and can often be pushed to the back of the 'queue for jobs' by better qualified competitors with few or no health problems (Beatty et al, 2009b; Stafford and Duffy, 2009). During the recession of the early 1990s, national economic inactivity rose alongside unemployment – and there is at least some evidence that in previously slack labour markets with a great deal of 'hidden unemployment', SREI behaved like unemployment in response to a sustained improvement in demand (Glancy, 2009; Webster et al, 2010). This sections that follow will briefly review labour market demand theory, how this might relate to change in SREI in reality and the 'official view' of how demand and SREI interact.

2.2.1 Understanding the role of labour market demand

Labour market demand affects the level of employment opportunity in several ways. Demand for labour of all kinds might be deficient in the national economy, due to a cyclical downturn or a recession. Local economies might also suffer from a deficiency of demand (even during periods of national or regional growth or recovery) perhaps due to the loss of a large traditional employer (Adams et al, 2000). This is important since for most sections of the population, except perhaps for some of the most highly-skilled, labour markets are essentially local. Local demand-side shocks are not simply a 'one off', as initial layoffs are multiplied by the failure of sub-contractors and reduction in workers' incomes. Recovery is likely to be delayed as the population shrinks through out-migration and spending on local services, public and private, reduces (Rowthorn, 2000; SLIMS, 2006).

Unless the local labour market affected is favoured by location and (perhaps) good fortune in inward investment – the West Midlands in the 1980s, for instance – this recovery process is likely to be very lengthy. A seminal study of economic adjustment in the British coalfields between 1981 and 1991 found that while job creation had taken place, it was not strong enough to offset the losses of the previous decade (Beatty and Fothergill, 1996). A more recent assessment of the coalfields, updating their analysis to 2005, found a more mixed picture: the smaller coalfields of the Midlands and the large South Yorkshire fields had staged an impressive recovery but the South Wales coalfields and to some extent those of North East England remained short of jobs for men (Beatty, Fothergill and Powell, 2007). Similar lessons are apparent from analysis of Britain's cities in the 1980s and 1990s. Smaller free-standing cities such as Edinburgh, Cardiff or Bristol performed consistently well but the northern conurbations of Clydeside, Merseyside and Tyneside still suffered from deficits of labour market demand at the turn of the 21st century (Turok and Edge, 1999; Gordon and Turok, 2005; SLIMS, 2006).

Nor, according to the 'collapsed labour market' thesis, is the impact of these changes in demand confined to a single generation. Some authors have argued that young adults who chose traditional routes into the labour market were disappointed by a preponderance of

poorly paid service sector jobs with few or no opportunities for advancement (Bynner et al 2002). This may be intensified by skills mismatch and spatial mismatch discussed in more detail below. In part, this reflects structural changes that narrowed the 'middle' of the labour market, reducing the number of entry level skilled manual and secretarial jobs available for young men and women as a result of deindustrialisation (Bynner et al 2002). Geography and time thus appear essential to understanding labour market demand.

More generally, just because job opportunities are available within a local labour market in principle, they may be inaccessible to the unemployed, due to spatial mismatch, skills mismatch and recruitment practices. Even at quite small spatial units, transport and housing costs, social networks providing access about jobs vacancies and (especially for young men in urban areas) territorialism may limit the capacity of the unemployed to access these opportunities, creating spatial mismatch (Sunley et al, 2006). Vacancies on offer may not marry with the qualifications and experience of those seeking work, resulting in skills mismatch (Green and Owen, 2002). Problems of skills and spatial mismatch may also interact and reinforce each other, rather than existing independently (Houston, 2005; Green and Owen, 2006). Recruitment methods might also affect the real world availability of vacancies. Only a fraction of jobs are advertised through the Job Centre Plus (JCP) network, while the actual number of vacancies posted at street level may be fewer than the official count because staff may choose to 'ration' vacancies to ensure (from their point of view) more efficient matching (White, 2003). In its more benign form, common JCP practice is to place only local jobs on display rather than provide general access to the full range of national vacancies (Houston, 2005), though this might reflect administrators' recognition of or beliefs about the commuting or migration constraints on Job Seekers. Employers may also prefer to recruit from other sources of labour, such as migrants, women returners and those leaving full-time education to seek full-time work (Hogarth et al, 2003).

In neoclassical theory, spatial mismatch is not a major problem: the unemployed adjust to job losses in a particular locality readily and smoothly, either by moving to where there are jobs available or extending the distances they are prepared to commute (Marston, 1985). However in practice these adjustment methods can only offer a partial solution. In times of

national recession, migration between local labour markets tends to be lower because of increased uncertainty and a reduction in job opportunities everywhere (Armstrong and Taylor, 2000). When national unemployment is high, migration may produce a more even distribution of joblessness across the country but will do little to change the overall numbers without work (Moore and Rhodes, 1981).

Even during a national 'boom', these adjustment processes may be insufficient to restore equilibrium on their own. This is mainly because those most vulnerable to joblessness, especially the low-skilled, are much less likely to move house or commute long distances to find work (Evans and McCormick, 1994; Green and Owen, 2002). In less skilled jobs, wages vary little across space, meaning the financial gain is small once transport and housing costs are factored in (McCormick, 1997; Rowthorn, 2000). Even for social renters, costs associated with moving to find work are often perceived to outweigh the benefits. Such costs are both financial and non-financial. Moving might entail cutting ties with family and friends and losing practical assistance with childcare, transport or money. Remaining in their local neighbourhood may even enhance job prospects, given that social networks can be a source of information about employment opportunities (Fletcher et al, 2008). Furthermore, neighbourhood and family ties may dissuade the low-skilled from moving to jobs, since they often lack the private transport that would make maintaining these networks easier (Houston, 2001). Constraints on commuting include high job search and commuting costs relative to benefits and wages, greater dependence on public transport and a search intensity that falls off with distance, since the competition for low-skilled jobs will become fiercer the further away from home they search (Webster, 2000; Webster, 2005; Patacchini and Zenou, 2005; Gobillon, Selod and Zenou, 2007).

Migration appears a more viable response to employment loss for men and for those in managerial and professional social classes than for women, the low-skilled and those from a manual social class (Bailey and Turok, 2000). Nationally those in poor health, owner occupiers, employees in agriculture, hunting and forestry, education and industry (mining and quarrying or manufacturing), and those with no formal qualifications were among the least likely to move between regions (Champion, 2005). Since it is the better-qualified and higher-

earning who tend to migrate, encouraging such moves can also be detrimental to the recovery of local economies by depressing immediate demand and reducing human capital and spending power that could promote a future recovery.

Commuting patterns too are far from neutral. Home owners, those with university degrees and those living in the South East of England tend to have longer journeys to work (Benito and Oswald, 2000). By contrast, women, those working in elementary occupations and those renting their home tend to have much shorter commuting differences (Green and Owen, 2006; Battu, 2007). Among job seekers, females seeking part-time or flexible work and the low-skilled and long-term unemployed are also less willing to commute long distances (McQuaid and Greig, 2001). In part this is due to 'distance decay': because of the costs associated with commuting, those employed in higher paid jobs can afford to travel longer distances to their work and often choose to live in suburban areas and work in urban centres (Webster, 2000). All things being equal, migration and commuting seem to be poor adjustment mechanisms to employment change (Bailey and Turok, 2000).

Demand-side problems can also occur at the level of the firm. Employer characteristics, the types of vacancies on offer and recruitment methods can reinforce the level of local unemployment. Where there are fewer manual and more part-time vacancies; where firms are smaller and skewed towards non-manufacturing sectors; and where employers are more inclined to recruit nationally or use private agencies, vacancy duration and therefore unemployment is likely to be higher (Adams et al, 2000). Finally, employer discrimination (real or perceived) may also increase unemployment (Adams et al, 2000). Real discrimination might occur where the unemployed are 'screened out' by employers at the application stage due to gaps in their job history or a lack of formal qualifications; perceived discrimination might make the unemployed disillusioned and less likely to apply for posts at all (Yeandle and MacMillan, 2003). As with the other demand-side forces at work, these tend to impact most strongly on those more disadvantaged in the labour market, precisely those groups in need of enhanced job opportunities.

2.2.2 Labour market opportunity and sickness-related economic inactivity

The previous section provides support for the view that demand-side factors vary across time and local labour markets. If sickness-related economic inactivity (SREI) responds to labour market demand, it should mirror these differences in demand. There is some support for this argument. Weakening national demand in an economic downturn reduces the prospects of people leaving Incapacity Benefits (Benitez-Silva et al, 2009). Some authors have also noted the steady growth in male 'non-work', especially SREI, during sustained periods of difficult economic adjustment (MacKay, 1999; MacKay and Davies, 2008). The greatest concentrations of SREI are found in *"the older industrial areas of northern England, South Wales and Central Scotland ... parts of Britain that suffered particularly severely from industrial restructuring during the 1980s and 1990s"* (Fothergill, 2001: 242).

The spatial distribution of SREI also parallels (to a greater or lesser extent) geographies of labour opportunity. Analysis of data from Britain, Germany and the USA suggests that the strength of local labour markets, measured by unemployment rates, is closely associated with IB claimant rates (Benitez-Silva et al, 2009). MacKay and Davies (2008) also found a clear and negative association between pressure of demand – measured by employment levels – and permanent sickness at the time of the 2001 Census. Indeed, the association was much more pronounced than that seen between unemployment and levels of employment opportunity (MacKay and Davies, 2008).

Some studies, it is true, suggest a more limited role for labour market demand. Faggio and Nickell (2005) found a positive association between the availability of local vacancies and economic inactivity, though their spatial unit of analysis (local authority) may not truly reflect local labour markets. Berthoud (2008) also found that labour market factors such as skills and local demand had a significant, but much weaker, effect on the employment opportunities of disabled people once the severity, type and condition of disability was accounted for. However, others have found residence in a weaker labour market to be positively associated with claiming Incapacity Benefits (Jimenez-Martin et al, 2007; Disney and Webb, 1991).

Many of those affected by working-age sickness-related economic inactivity have at least one characteristic that would limit their capacity to migrate and the distances they can commute. This can be shown by examining the results of published surveys of Incapacity Benefit (IB) claimants in Britain conducted between 1993 and 2007. A substantial number of current IB claimants – a third of recent claimants and 60% of the stock – have no formal qualifications, recent work experience is skewed towards semi-skilled and unskilled occupations and more than 40% are social renters (*Table 2.1*). These proportions are high compared to the general population and are likely to reduce the capacity of IB claimants to commute or migrate. Trends over time can also be examined (*Table 2.2*). Home ownership became less common, and private renting slightly more common, among Incapacity Benefits (IB) claimants between 1993 and 2007. These shifts in tenure might be expected to increase migration capacity but reduce commuting potential (Battu, 2007). Net change to IB claimants' ability to access distant jobs is likely to be small. The cohort has also become more gender-balanced over time. The growing gender balance of claimants would also be expected to have a negative impact on migration and commuting, because of greater constraints on geographic mobility faced by women noted earlier. Most other changes are unlikely to have made much positive impact on the potential for migration and commuting among IB claimants.

Table 2.1: Characteristics of Incapacity Benefits claimants compared to the general population: expected impact on commuting and migration

	IB Claimants (2007/08)	General population (2007)	Commuting	Migration
Owner-occupation	*42% recent (2007), 29-36% stock (2009)*	*68%*	*Lower*	*Higher*
Social renting	*40% recent (2007), 42-47% stock (2009)*	*19%*	*Lower*	*Lower*
Private renting	*14% recent (2007), 15-17% stock (2009)*	*11%*	*Higher*	*Lower*
Hold a degree	*11% recent (2007), 2% stock (2009)*	*18%*	*Lower*	*Lower*
No formal qualifications	*34% recent (2007), 59-60% (2009)*	*14%*	*Lower*	*Lower*
Professionals/associate professional	*8% recent (2007), 6-8% stock (2009)*	*29%*	*Lower*	*Lower*
Unskilled/semi-skilled manual	*28% recent (2007), 29-30% stock (2009)*	*12%*	*Lower*	*Lower*

Sources: Kemp and Davidson (2007); Beatty et al (2009b).

Beatty et al (2009b) interviewed 1,890 women and 1,265 men claiming IB in eight IB claimants (including NI credits-only claimants) between March and September 2007.

Kemp and Davidson (2007) interviewed 1,843 recent IB claimants in 2007.

Table 2.2: The changing characteristics of Incapacity Benefits claimants over time: expected impact on commuting and migration

Characteristic	Past	Current *	Commuting	Migration
Gender	61% men 39% women	52% men 48% female	Decreased	Decreased
Owner-occupation	50% (1993)	29-36% (2009)	Decreased	Increased
Social renting	35% (1993)	42-47% (2009)	Decreased	Decreased
Private renting	7% (1993)	15-17% (2009)	Modest decrease	Modest increase
Hold a degree	3% (1993)	2% (2009)	Unchanged	Unchanged
No formal qualifications	57% (1993)	59-60% (2009)	Unchanged	Unchanged
Professionals/associate professional	5-15% (1993)	6-8% (2009)	Unchanged	Unchanged
Unskilled/semi-skilled manual	34-39% (1993)	29-30% (2009)	Unchanged	Unchanged

Sources: Lonsdale et al (1993); Beatty et al (2009b).

Lonsdale et al (1993) interviewed a nationally representative sample of 1026 people who had been claiming IVB on 31 March 1990 in March and April 1992.

* Comparisons based on Beatty et al (2009b) sample, which is likely to be more comparable with the Lonsdale et al (1993) than Kemp and Davidson (2007), because the latter focused on recent claimants.

Several studies have used the labour market accounts approach to quantify the contribution of different adjustment mechanisms to employment loss. In the English and Welsh coalfields between 1981 and 1991, reduced economic activity was the most substantial change acting to restore balance. The number of working-age men neither in a job nor looking for one increased by nearly 85,000 or 6.8% of the 1981 working-age male population. The contribution of migration and commuting was much smaller (Beatty and Fothergill, 1996). In Britain's cities over the same period, out-migration was the most important factor for men responding to employment loss (-7.8%), but withdrawal into economic inactivity – equivalent to 5.4% of the 1981 working-age male population – was also substantial. As in the coalfields, commuting made a negligible contribution to rebalancing the labour market (Turok and Edge, 1999). While for some of those men the move into inactivity was voluntary – for example, into early retirement – the largest component of this growth in inactivity is likely to have occurred in those describing themselves as long-term or permanently sick, a process described more directly elsewhere (Beatty and Fothergill, 2003; Fieldhouse and Hollywood, 1999). Both the characteristics of current IB claimants and the historic evidence suggest that the scope for adjustment through migration and especially commuting is very limited.

In terms of skills mismatch, a number of writers highlight the fact that the rise in economic inactivity has not occurred among all those with health problems, but disproportionately among the low-skilled (Bell and Smith, 2004). However, changing occupation through 'upskilling' also appears less straightforward than neo-classical theory suggests. In the UK, opportunities for advancement from low-skilled occupations to better jobs remain limited, particularly for women (Atkinson and Williams, 2003). In a longitudinal study of 1981 miners, Fieldhouse and Hollywood (1999) found that the prospects of finding work in a new industry were as low as 1 in 4. Only 42% of 1981 miners were still in employment in 1991, but half of these were still employed in the same industry. People living in urbanised areas and those moving from less specialised jobs may find it easier to find new jobs, though movement between industrial sectors is rare and there is also evidence of 'bumping down' to less rewarding employment. A follow-up survey of ex-MG Rover workers made redundant in 2005 found that almost half of those who found new jobs were working in industries

associated with manufacturing or engineering, a majority had suffered a wage penalty in the move and around half reported lower job satisfaction (Armstrong, 2006).

How firms operationalise labour market demand also remains a key factor. One study on the implementation of the government Restart scheme in London found those older people and those with health problems were particularly disadvantaged in terms of being offered job placements (Gray, 1987). Examples of direct discrimination are rare but research suggests that employers are reluctant to employ older people with health problems because they perceive them to be a bad risk (National Audit Office, 2004). Employers also appear to have a fairly narrow definition of people with physical disabilities and are less likely to take on this group than the traditional long-term unemployed and lone parents. In addition, employers appear to have the greatest concerns about people with mental health problems, though those who had actually recruited individuals in this category were more positive. Employers also thought they would be less willing to recruit someone with a mental health problem into a stressful situation or which might lead to health or safety implications for the employee or the employer (Bunt et al, 2001; Sainsbury et al, 2008). This suggests that a mix of tacit discrimination and pragmatism on the part of employers count against the long-term sick and disabled in the recruitment process.

2.2.3 Labour market demand: the official view

There is a marked contrast between official (Treasury/DWP) views on the role of demand and those of many academics. Beatty and Fothergill (2005) are among the most vocal in their belief that in the industrial heartlands, *"fundamentally, labour market demand needs to be boosted"* (Beatty and Fothergill, 2005: 853), with enhanced regional policy being proposed as the main mechanism to achieve this. In this view, the starting point for rising SREI was the huge loss of jobs, particularly in skilled and semi-skilled occupations and traditional industries in the 1980s. These trends continued in the 1990s, albeit not on the same scale and were concentrated in particular parts of the country. Growth of SREI, however, was not driven purely by the historic destruction of jobs, but by the length of time local labour markets took to recover. While replacement jobs were created, they were on an insufficient

scale to offset losses in particular localities. The persistence of low labour market demand in certain local labour markets has led to large numbers of men – especially middle-aged and older men with health problems – being marginalised and their unemployment concealed, mainly in long-term sickness claims (Beatty, Fothergill and MacMillan, 2000). This is the 'hidden unemployment' thesis.

However, the belief that a lack of jobs (demand deficiency) might be part of the problem has been consistently rejected by the DWP and Treasury. While acknowledging that worklessness may be concentrated geographically, especially in cities, older industrial areas and the coalfields, the official view offers a very different analysis of the underlying causes. Central to this thinking is the large number of vacancies available in the *national* economy and the number of jobs and vacancies available in cities especially (HMT, 2000; HMT, 2003; DWP, 2007a). Traditional demand-side policy measures are therefore deemed unnecessary. Indeed, it is suggested that they might do more harm than good in the long-term, by risking inflation. Where spatial pockets of worklessness do exist, they are confined to small, localised pockets, often at the neighbourhood level: *"the worst concentrations of worklessness are in very small defined areas and are caused not by a lack of jobs"* (HMT, 2003: 46). The official view also holds that job creation at such small spatial units would be self-defeating: *"unless the people who live in Britain's most deprived communities are equipped to take advantage of vacancies, such jobs will go to people from outside the area....The challenge instead is not simply to get jobs to people, but also to ensure that people in deprived areas can get into jobs wherever they arise."* (HMT, 2000: 7).

Instead, the core approach is largely about improving efficiency in the labour market by connecting people with existing opportunities. This is consistent with a view that 'supply creates its own demand' in the labour market and is likely to occur in two ways. First, as the number of people searching for work increases (or the search intensity of the existing stock of unemployed increases), firms are better able to fill existing vacancies (Carlsson, Eriksson and Gottfries, 2006). Second, as the spending power of those in employment is likely to be greater than the unemployed, demand will increase, stimulating a further creation of job vacancies. Realising full employment, in this vision, is much more about addressing the

barriers that individuals face to improving their 'employability'. This might involve both supporting people more effectively (helping them acquire basic skills, improving transport infrastructure, investing in childcare) and expecting more of them, by tightening the criteria required to access passive benefits (Freud, 2007; DWP, 2008). This official view concedes that demand-side problems might arise at the firm level, for example through employer discrimination on the grounds of age, race or disability, but argues that the proper vehicle to tackle this is through legislation (HMT, 2000; HMT, 2003). Some of the thinking also echoes the thinking of Mead and Murray (see Section 2.3) in two ways. First, by arguing that the lack of opportunities is purely historical, the implication is that judgements on the labour market made by the workless are outdated or simply wrong (HM Treasury, 2000). Second, there is a concern that welfare dependency is not fostered. This might occur through perverse incentives (e.g. through on overly complex benefits system or with the value of IB benefit payments increasing with claim duration). It may also occur if benefits are paid without reciprocal obligations being imposed on claimants (DWP, 2006b; DWP, 2008).

Within the official view, there is recognition that certain individuals might face multiple barriers to employment and a conscious targeting of lone parents, ethnic minorities, the over 50s and the low-skilled, who all have lower employment rates than other groups in society. Other groups, such as young adults, are included in the categories of individuals who may need support, but little credence is given to the concept of the 'collapsed' labour market (HM Treasury, 2001; HM Treasury, 2003; DWP, 2007b). Even critics of the New Deal for Young People (NDYP) programme, do not disagree with the official premise that sufficient employment opportunities were available for young people (Field and White, 2007). Running parallel to this argument is the increased choice for young adults over the time frame discussed, especially the expansion in educational opportunities in the 1990s. This view argues that from the mid 1980s, young adults and their families adjusted to the new realities and were more likely to prolong their education, a process also facilitated by the introduction of new examination system (Croxford et al, 2006). Young adults were 'twice-blessed', in terms of opportunities, with greater scope to prolong their education and a buoyant labour market for those who chose not to opt for this route. There is some truth in this, as shown by growth in young adults moving into Higher Education in the 1990s.

What is more problematic is the evidence assembled by the Treasury and DWP themselves to reject demand deficits as a causal factor. In *Full Employment in Every Region* (2003) they show the very weak association between the number of jobs available at a local authority level and the percentage of the working-age population claiming key benefits, to demonstrate their case that *"a lack of labour demand is by no means the main explanation"* (HM Treasury, 2003: 39). Labour market demand, though, is likely to operate at a different spatial scale than these administrative boundaries. This is especially the case for cities, which are highly jobs dense but which also attract large numbers of commuters from outside their boundaries. After all, this is the thinking behind the development and use of Travel to Work areas as *"a useful complement to analysis by local authority districts"* (HM Treasury, 2000: 5). Routine analysis of labour markets at too small or too large a scale is likely to present a highly misleading picture of the true demand for labour.

A second challenging assumption is that there are sufficient vacancies in all parts of Britain, especially for 'entry level' jobs, to accommodate the unemployed and economically inactive who want work: *"with jobs being created every day...the opportunities to work are there"* (DWP, 2007b: 91). Early policy documents estimated that there were around a million job vacancies in Britain, based on a grossing up of vacancies advertised at Job Centres according to market share (HM Treasury, 2000). However, subsequent employer surveys, which offered a more complete coverage, suggested that the true level of vacancies was closer to 600,000 (DWP, 2007a). Dissenting analysis by the NAO highlights the fact that around a third of vacancies are open largely, if not exclusively, to the most highly qualified (with NVQ Level 4 qualifications or above), with only 7% not asking for any qualifications at all. Breaking down the data in a slightly different way, they find that the greatest numbers of vacancies (135,000) are in elementary occupations. Many of these jobs, however, are taken by those who might be considered 'over-qualified', with students and those with childcare responsibilities working part-time being especially attractive to employers (NAO, 2007; Munro et al, 2009). As with the jobs density data, the question of geography is either ignored or treated as able to be overcome through commuting or migration. As discussed above, such assumptions are much less applicable to those most affected by SREI.

Finally, the interaction between changes in supply and changes in demand for labour may not be as straightforward as implied by the Treasury view. Where the overall population of an area increases (through natural population growth, migration, or increased participation), increased consumer spending is likely to expand the demand for labour. However, Carlsson et al (2006) found no evidence that job creation occurs in the short and medium-term by increasing the supply of people searching for work. In Britain, employment change across different regions between 1971 and 1991 was determined much more by *natural* growth of the labour force and net migration than by changes in labour force participation or unemployment (Batey and Madden, 1999). Economic theory also suggests that a greater supply of labour will also help keep wages low and allow employers to open more vacancies, but in practice areas with high levels of demand and population growth also tend to have higher levels of earnings. Furthermore, where demand falls in a local labour market (e.g. through job losses), the population is also likely to fall, further reducing demand because of drops in domestic spending (Rowthorn, 2000). It is unclear how these issues can be overcome without paying renewed attention to demand-side issues.

2.2.4 Summary

Labour market demand can influence labour market opportunity over time (through fluctuations in general demand and structural) and by geography (through the uneven distribution of jobs and vacancies across local labour markets). Personal characteristics and circumstances often reduce the capacity to move or commute to labour markets further afield. Mismatch between the skills and experience of the jobless and available opportunities, imperfect information and employer practices can compound these problems. Many of the SREI live in local labour markets adversely affected by structural adjustment in demand and with ongoing weaknesses in labour market demand. It is debatable whether there are enough jobs available in certain parts of the country, for instance in the South Wales Coalfields, or the North East of England (Beatty, Fothergill and Powell, 2007; Adams, 2005a) to soak up surplus labour supply. Many SREI also share the characteristics that make skills and spatial mismatch real barriers to them finding work. Indeed, there is mounting evidence that withdrawal into economic inactivity, and particularly SREI, was the most rational response to the particular circumstances in which they found themselves. The DWP and Treasury view is

that local labour market demand is unimportant as a cause of SREI. However, there is enough countervailing evidence to suggest the issue is not closed. In the round the evidence seems to point to both individual characteristics, especially advanced qualifications and good 'soft' skills *and* strong local demand for labour, being critical in helping people secure employment (McQuaid, 2006).

2.3 The growth of sickness-related economic inactivity, the benefits system and the work ethic

The second explanation for the growth in SREI focuses on the interaction between the benefits system and cultural norms, especially the work ethic. As originally conceived, the work ethic involves seeing *"hard, continuous bodily or mental labour"* as a moral good in itself and an obligation to society (Weber, 1930: 158). In particular, work is seen as valuable not merely for the material benefits it beings to individuals but because it gives meaning and purpose to life, prevents people from sliding into laziness and discourages wasteful or frivolous use of time (Weber, 1930). The work ethic remains a key concept when thinking about SREI in Britain, given its influence on the benefits system and employers' perceptions and practices.

Policy-makers concerns about balancing support for the unemployed while maintaining the work ethic have a long pedigree in Britain, but their efforts have intensified over the last 30 years (Alcott, 2003; Prideaux, 2001; MacKay and Davis, 2008). If welfare payments and rules are too generous then the least skilled (whose market earnings will be relatively low) may be tempted to choose a life on benefits. This is partly due to economic incentives but may in the longer-term create a 'culture of worklessness' as commitment to employment declines among families and communities (DWP, 2006b; Alcott, 2003; Prideaux, 2001). In response, the previous (Labour) Government argued that increasing the number of people in paid work was the best way of promoting individual autonomy and reducing poverty. This was to be achieved by increasing the financial incentives to work (through tax credits, the minimum wage) but also by increasing the moral imperatives to work by increased conditionality, including enhanced medical tests for IB claimants (Prideaux, 2001; DWP, 2006a; Buck et al, 2006). The current Conservative-Liberal Democrat Coalition agrees, proposing to introduce a Universal Credit to minimise the real and perceived financial costs they believe prevent people from working (DWP, 2010). Employers have also expressed their support for the work ethic, often citing it as an essential skill among current and potential recruits (Learning and Skills Council, 2006; BCC, 2009).

Whether this view of the work ethic provides a framework for reducing the scale of SREI remains unclear. Concerns have been raised about a modernised version of the division into 'deserving' and 'undeserving' poor being deployed among IB claimants, and the impact on their mental and physical health (Bambra, 2008). Arguably the work ethic provides an uneven bargain, with a focus on the obligations of claimants, with little to say on the obligations of the state to provide jobs or employers' social accountability (Prideaux, 2001; Sunley et al, 2006). Some employers also may conflate a good 'work ethic' with an uncritical acceptance of employers' terms, conditions and work method, which is not necessarily compatible with encouraging individual autonomy (Ruhs and Anderson, 2010). Nonetheless, British welfare reform has also been strongly influenced by this concept, through U.S. theorists and a more home-grown focus on 'rights and responsibilities' for benefit claimants (Prideaux, 2001). This section will briefly outline the ideas of two key American theorists on the benefits system – Lawrence Mead and Charles Murray – and how their thinking might relate to the growth of sickness-related economic inactivity in Britain. More traditional incentive effects, related to 'moral hazard', are also discussed.

2.3.1 Mead and the 'culture of despair'

In developing this view, Mead (1997a) first discusses a number of alternative explanations for the growth in working-age poverty in the U.S. and in the number of working-age people claiming benefits. He dismisses the argument that it reflects changes in labour market opportunities. Three points are offered here. First, although he acknowledges that manufacturing employment has declined, he asserts that this has been more than compensated by growth in the service sector; moreover, he asserts that there are plenty of jobs at the bottom and middle of the labour market. Second, he is a firm supporter of 'search intensity' theory (see section 2.2.3): broadly, where people are more willing to search for work and take up employment opportunities, this will help trigger a virtuous cycle of further job creation. Finally, he argues that the pressure from the supply-side of the labour market was, by the 1990s, being reduced by lower birth-rates: this is in contrast to the 1970s and 1980s, when larger numbers of young adults were entering the jobs market. While Mead's original theory was based on U.S. research, he does not object to them being applied to Britain.

For Mead (1997), the administrative efficiency and generosity of the benefits system is a facilitator rather than cause: it is the emergence of a 'culture of despair' that explains the growth in working-age benefit caseloads. He suggests this is closely linked to a collapse in social norms (such as working hard, obeying the law, personal responsibility and traditional parenting) – a collapse which was concentrated almost exclusively among the non-working poor. As this culture of despair became entrenched within families and communities, it became intergenerational and almost structural. In this critique, the welfare state may have facilitated the long-term detachment of the non-working poor from the labour market, but it did not cause it. Rather, in his view: *"the major cause is being raised in families that were too disorganised to inculcate social norms and capacities, often because the parents were themselves jobless and dependent"* (Mead, 1997b:129). The solution advocated by Mead is a 'new paternalist' approach, where intensive support is combined with tough sanctions and other measures designed to compel welfare recipients to work.

There are a number of problems with Mead's analysis of the labour market. While keen to reject any idea of spatial mismatch, he admits that lack of jobs may be more of an issue in the cities of the North-East USA (Mead, 1997a:10). His view that service sector jobs replaced manufacturing jobs is broadly accurate but fails to confront the reality that in the 1980s and 1990s many full-time jobs (in manufacturing) were being replaced by part-time jobs (in services). This is problematic given his earlier emphasis and insistence that reducing working-age poverty means working 'normal hours': 50 weeks a year, 35 hours a week (Mead, 1997a:3). There is a further contradiction on the supply-side: Mead emphasises the dynamic effects of immigration on the U.S. economy but does not consider whether new migrants might be considered competitors at the bottom of the labour market – precisely where people leaving benefits might be most likely to find a foothold. All three issues (geographical differences, qualitative change in the jobs market and displacement) are equally relevant to Britain.

A more general issue is how readily his labour market theory can be transplanted from the USA. The British situation differs in several important respects. Working-age people are less geographically mobile in Britain than the USA, and the concentration of workless people in social housing rather than the private rented sector further restricts mobility among this group. One response may be to reform the benefits system (especially housing benefits and social housing allocation) to remove disincentives to internal migration (Leunig, 2009; BBC, 2010). However, investment in workforce skills might be a more effective way to achieving this aim, especially given the strong correlation between the average years of schooling and regional mobility, including in the US (Machin et al, 2008). There is also some evidence that providing more generous unemployment benefits may increase mobility, by allowing the unemployed to cover costs associated with finding and securing job opportunities (Tatsiramos, 2004).

On the demand-side, the decline of manufacturing employment in Britain (especially in the older industrial regions) was much more pronounced than it was in the USA (Rowthorn, 2000). Mead admits the limits of his knowledge on the British labour market, conceding that lack of jobs may be more of problem in the 'North' of Britain, perhaps even justifying job creation in these regions. There is also a more racial flavour to Mead's argument, with his concern that historic racism against Blacks may have exacerbated this problem in the USA. Although racial discrimination remains alive and well in Britain, its character is very different – and almost all Incapacity Benefits claimants are white (Kemp and Davidson, 2007).

This leaves the main thrust of the argument set out by Mead: that a culture of despair, based on outdated preconceptions about the labour market, reinforces a (false) belief that there are no decent jobs available and leads to self-defeating behaviour among families and communities. Benefits systems without reciprocal responsibilities permit this situation to continue. Both the UK Government and Opposition would agree with elements of this analysis.

However, the evidence to support or reject the concept a 'culture of worklessness' is inconclusive. Jobless residents of deprived communities, including IB claimants, tend to exhibit strong pro-work attitudes and express feelings of stigma and frustration about their status (Beatty et al, 2009b; Fletcher et al, 2008; Houston et al, 2008; Crisp et al, 2009). A more recent study also found *"great personal commitment to employment..."* among residents of two deprived Teeside neighbourhoods, with a widespread, positive attitude towards work that was learned from parents (Shildrick et al, 2010: 16-17). By contrast, employers, Job Centre Plus officials, and local officers working in area-based initiatives across Britain often argue that such cultures of worklessness are real (Beatty et al, 2009a; Beatty et al, 2009b; Houston et al, 2008; Shildrick et al, 2010). A minority of local residents in deprived neighbourhoods concurred, though they were often in work themselves or keen to distance themselves from such a culture (Crisp et al, 2009; Pinkster et al, 2009). There are overlaps with the literature on neighbourhood and family effects (see the next section), where – it is argued – deviant norms are learned from peers or family (Shildrick et al, 2010; Pinkster et al, 2009).

Both accounts are subject to bias. Jobless people may prefer to attribute their status to external factors (such as immigration, bad luck or weak trade unions) rather than a lack of personal effort or efficacy (Furnham, 1982; Layton, 1987). Employers are unlikely to concede that the low-pay, insecure work on offer (a demand side factor) is at least partly responsible for reducing motivation in some locales (Beatty et al, 2009a; Beatty et al, 2009b; DCLG, 2010). The 2005 National Employers Skills Survey, for example, found that employers were twice as likely to attribute recruitment problems to lack of applicant skills as to the poor terms and conditions attached to the job (Learning and Skills Council, 2006). In deprived neighbourhoods, negative attitudes towards employment may not be based on historic views but on recent experience in low-paid, poor quality jobs at the bottom of the labour market (Crisp et al, 2009). Lack of familiarity with formal recruitment methods, limited 'bridging capital' to alternative social networks and negative educational experiences can also constrain entry and progression in the labour market (Quinn and Seaman, 2008). One study found that perceived job quality, investment in training and opportunities for advancement all fell in the UK between 1996 and 2001 (Gallie and Paugam, 2002). The

benefits system itself may also reinforce joblessness, through complexity and inflexible rules that mean financial gains from moving from benefits to work can be very low (DWP, 2010). In some cases, practices among frontline Job Centre staff might undermine jobseekers' efforts to find work e.g. through rationing of vacancies (White, 2003). These complex and interlocking issues call into question the quality of the evidence base on a 'culture of worklessness'.

2.3.2 Murray and the underclass

A second theory of how the benefits system might relate to increased claimant caseloads comes from Charles Murray. While the analysis offered by Murray retains some elements discussed by Mead, it also differs in certain important respects. Both Mead and Murray write from a US perspective, but have found (some) British commentators receptive to their message. Both theorists focus on a 'problem' sub-set of the poor, rather than the poor in general: both are concerned with altering this group's behaviour. Like Mead, Murray points to an increase in social ills (births outside marriage, violent crime and a decline in the work ethic), concentrated both socially and spatially. But while for Mead the root causes lie in dysfunctional families, Murray argues that it was fundamental changes in the *"rules of the game"* that facilitated the growth of an underclass (Murray, 1996:44). The state, and the benefits system, is more directly culpable in this account (though changing social norms also play a role).

The *"rules"* that Murray refers to take two forms: informal and formal. Informal rules are largely set by society and usually reflect social norms. Sanctions for breaking the rules take the form of stigma. Examples given by Murray include attitudes of older men in Easterhouse in the 1970s towards drawing dole money, or the shame attached to lone parenthood in the 1950s. Formal rules are largely set by the state. Examples might include how punitive the justice system is and how generous the payments to those of working-age not in employment (for whatever reason) are. Murray argues that since the 1950s but especially since the 1960s and 1970s there has been a successive weakening of both informal and formal rules that previously prevented an underclass from emerging. Once the dam was broken, it proved

increasingly difficult to stem the growth. Murray cites the increasing generosity of Income Support and Housing Benefit payments and the Homeless Persons Act as examples of the way in which the welfare state made the penalties for 'breaking the rules' less severe for lone parents (Murray, 1996). By 2001, Murray argued that the British underclass, which had been embryonic in the late 1980s, *"increasingly resembled, in behaviour and proportional size"*, the American one (Murray, 2001:2).

Despite these differences, Murray shares two similarities with Mead. The first is a lack of emphasis on spatial variations in demand. Very low *national* unemployment rate are cited as evidence of this, though he does qualify this by recommending *"full-blown analysis by geographic region"* (Murray, 1996:4). Earlier, Murray had gone further in his discussion of worklessness among young working class males by challenging someone to compare employment rates for low-skilled young males in the booming South of Britain with the older industrial regions of the North. In his words: *"If lack of jobs is the problem, then presumably economic inactivity among lower class healthy young males in the south has plummeted to insignificant levels. Has it?"* (Murray, 1996:39). However, employment rates for young adults with low qualifications in Britain continue to show a stark divide between the South & East of England and the large urban centres (see Chapter 7), providing some supporting evidence for demand-side explanations.

The second unintentional similarity is in the ambiguity over how the rules came to be broken. Beginning with formal rules, Murray argues, for example, that the workshy attitudes of unemployed young men that emerged in the 1980s stood in direct contradiction to their older brothers or fathers, an attitude fostered by a benefits system that increasingly asked little in return (Murray, 1996). It might reasonably be expected that a generous welfare states damaged the work ethic.

In fact, the evidence for this remains contentious, especially in the British context. First, there is no evidence that Britain's welfare state is generous compared to other countries.

Across Europe, only the Baltic states have higher rates of poverty among the incapacitated while risk of poverty among the unemployed is higher in the UK than every country except Ireland (Whelan and Maitre, 2009). Second, the view that less generous welfare provision to working-age adults promotes higher commitment to employment should be treated with caution. In an important paper, Esser (2009) studied subjective work commitment across 13 OECD countries using data from the International Social Survey Programme (ISSP). Her focus was on 18-59 year olds in employment, unemployed or looking after home and family. The measure of work ethic used was a composite score from 1-5 derived from responses to two questions (*I would enjoy having a paid job even if I didn't need the money* and *A job is just a way of earning money – no more*), with higher scores indicating greater commitment to employment regardless of financial need. Countries were divided into three categories according to the generosity of their welfare states in replacing earnings and protecting incomes of the working-age population. Encompassing states included Scandinavian countries and were the most generous, replacing around two-thirds of earnings for a production worker on average earnings. Corporatist states, such as Germany and Belgium, occupied an intermediate position, with just over half of earnings replaced. Finally, basic welfare states, including Britain, were the least generous, replacing around a third of earnings. Esser's analysis revealed that work commitment scores were lowest in basic welfare states and highest in encompassing states – and Britain had the lowest work ethic of any of the countries surveyed.

These findings challenge orthodox views about worklessness. Conditions attached to claiming benefits in Britain were tightened steadily over the last 20 years, to improve attachment to the labour force (Atkinson, 1990; Lonsdale, 1993; Wikeley, 1995; MacKay and Davis, 2008). Yet work commitment among the economically active fell significantly in Britain between 1989 and 1997 (Esser, 2009). This finding also makes it difficult to attribute growth in SREI solely to increased labour market 'exit' among the least work-committed. If this were the case, work commitment might have been expected to remain stable or even increase among the economically active. The view that a punitive approach to benefits by itself will increase work commitment and reduce caseloads is not supported by the evidence.

Esser (2009) stresses that her findings do not suggest that the work ethic could be strengthened if benefits were more generous. However, she does note that countries with stronger work ethic often combine extensive social programmes alongside active labour market policies, and suggests greater attention should also be paid to the quality of the jobs market (in terms of worker conditions, job control etc.) (Esser, 2009: 98). This might be considered alongside an E.U.-wide study which found that *"low task quality, higher levels of work pressure and job insecurity undermined commitment to employment"* (Gallie and Paugam, 2002: 110).

The Esser analysis has a number of limitations. The British ISSP sample, while representative, was small (n=527 in 2005) compared to other countries. As noted above, the sample excluded the permanently sick and disabled and early retired, so it is not possible to come to firm conclusions on trends in work commitment among the economically inactive, including the SREI. If such analysis is feasible, it might provide clues as to whether changes in work commitment among the jobless are relevant to this issue. However, the available findings do mean that concerns about a declining work ethic in Britain are not just confined to those dependent on state benefits.

Murray also argues that the growth in non-employment in the 1990s among young adult males in Britain is proof of the growing underclass, with similar causes. Again, this would require the administration of benefits to become more relaxed over time, but the introduction of the stricter benefits regime, Job Seeker's Allowance, Incapacity Benefit and New Deal for Young People would point in the opposite direction. The rules of the game were becoming more stringent over time, not slacker – and they either had no influence on or the reverse of what was expected on claimant behaviour. For example, it has been argued that introduction of the Restart scheme for the unemployed in 1988, built on sanctions, counselling and advice but few opportunities for work experience, *"promoted the shift from unemployment to a more expensive benefit system"* (MacKay and Davis, 2008: 475). Similarly, the introduction of Job Seeker's Allowance in 1996 failed to generate the expected improvement in 'job search intensity' and was accompanied by further shifts into economic inactivity (Manning, 2009).

Nor is Murray's view that a lessening of social stigma contributed to this phenomenon wholly convincing. In Britain, public attitudes towards benefit claimants appear to have hardened over time. For example, between 1986 and 2006, British adults became more inclined to believe that fraudulent claiming is widespread and more likely to believe that benefits for unemployed people create disincentives to work (Taylor-Gooby and Martin, 2008). Benefit claimants are not immune from this climate, with many of those detached from the labour force, especially in Britain, reporting that they feel highly stigmatised. Feelings of boredom, loss of social contact, pride and self-esteem are also commonly reported (MacMillan, 2003; Clasen et al, 1998). Moreover, it is unclear whether higher levels of social stigma attached to claiming benefits can reduce caseloads. The proposition is that more generous benefits are associated with less shame in claiming benefits and greater numbers of claimants. Welfare stigma *is* greater in counties with more limited benefits provision. But so too are levels of poverty and unemployment (Contini and Richiardi, 2009) – and the number of people dependent on the state.

Overall, Murray's case remains unsubstantiated, though he raises some interesting questions about neighbourhood level effects and economic incentives. While the former is discussed later in this chapter (see 2.4.2) the issue of moral hazard should certainly be discussed in more detail.

2.3.3 Moral hazard

A third group of explanations that link together the welfare state and growing caseload of Incapacity Benefits claimants coalesce around the concept of 'moral hazard'. It is proposed this moral hazard takes four main forms. First, the imperfect distribution of information between the insured population (who presumably know the true state of their health) and those administering the system carries with it the risk of fraud. Second, engagement in 'riskier' behaviour – low investment in own education, and choosing jobs more vulnerable to loss – is higher where the population is protected by insurance. Third, in public insurance

systems especially, the rigour with which the rules are enforced might vary over time and between localities, even with a single national framework. Fourth, where coverage is universal and there are multiple benefits on offer, differentials can shift people to more generous benefits and keep them there. Unemployed claimants who qualify for Incapacity Benefits might opt to claim this because of its relative generosity. The level of payment to IB claimants also increased for long-term claimants. By increasing the loss of income for those returning to JSA, this might have also created an additional barrier to exit.

The literature on this tends to stress the last two explanations (weaker rules and financial incentives). In particular, the emphasis is on the perverse economic incentives inherent where Incapacity Benefits paid more to claimants than unemployment benefits. Evidence from Britain, the USA, Canada and Spain underlines this point, with growth in the caseload during times of difficult economic adjustment at least partly attributed to this aspect of moral hazard (Campolieti, 2002). The lessons from reforms of such systems also appear clear: remove the premium, and there will be less incentive for those with health problems who might otherwise have registered as unemployed to claim Incapacity Benefits. Britain's replacement of Invalidity Benefit with Incapacity Benefit in the mid-1990s reduced, but did not eliminate, the premium associated with Incapacity Benefits for older men (Bell and Smith, 2004). In Sweden, the capping of sickness insurance system payouts in the early 2000s, which were previously more generous than unemployment benefits, appears to have had a similar effect in stemming the growth of the caseload (Larsson and Runeson, 2007).

Such reforms are seldom initiated in isolation: they are usually accompanied by attempts to make the screening mechanism to gain access to long-term sickness benefits much more rigorous (with the implicit assumption that it was becoming too easy for those with the 'undeserving sick' to access such benefits). Bell and Smith (2004) hint that such processes were at work in Britain during the late 1980s and early 1990s, illustrated by the decreasing proportions of IB claimants being referred for additional medical tests before receiving benefits. To some extent, the perception that it was becoming easier to claim during this period is shared by those on the ground (McCormick, 2000). There is also some evidence

from Spain (using household panel data) to suggest that at least one-fifth of those claiming long-term sickness benefits benefits would be ineligible if rules were applied more stringently based on reported health conditions (Jimenez-Martin et al, 2007). More generally, several authors in Britain draw attention to the high proportion of those claiming IB for hard-to-define and/or 'manageable' conditions, such as musculo-skeletal (back and torso) complaints and mental health problems. The shift from physical health complaints during the 1990s towards mental health problems has also been noted (DWP, 2005; Bell and Smith, 2004; Freud, 2007). As noted by Kemp (2008), new, less 'visible' health problems tend to provoke more questions about the legitimacy of IB claims.

Section 2.5 considers health specific issues in more depth. For now, it remains an open question how much findings from other countries can be transplanted to Britain (McVicar, 2008). U.S. research is explicit that there were changes in 1984 that relaxed the criteria necessary to gain access to long-term sickness benefits in that country (see Autor and Duggan, 2006) but no obvious comparable relaxation in the rules has been identified for Britain. Of course, different age groups claiming IB may have different incentives to claim. Previous research has suggested that older men may have had an incentive to claim IB rather than JSA if they had a pension income, some savings, owned their own home outright or their partner was in employment (Beatty and Fothergill, 2003:123). Some of the implications for young adults are considered in more detail in Chapters 6 and 7. Yet Department of Social Security doctors still had a key role in the decision making process even before Incapacity Benefit replaced Invalidity Benefit in 1995 and arguably their position was strengthened after this date by the 1994 Social Security Act and the All-Work Test (Lonsdale, 1993; Wikeley, 1995). DWP doctors remain as gate-keepers for those wishing to access Incapacity Benefits.

There are also legitimate questions of whether the focus on reducing inflows might miss the point, since the collapse in exit rates from IB might have been more important in driving caseload growth (Autor and Duggan, 2006; Disney and Webb, 1991; McVicar, 2008). Since 1994, the rules have been progressively tightened and the role of DWP-appointed doctors strengthened. From the perspective of many claimants, these reforms, including Pathways to

Work, have focused far too much on reducing the number of claimants with insufficient regard for the real health problems they face (Collins et al, 2009; Prior et al, 1998). Nevertheless, it may prove useful to re-examine the British data in more detail for evidence of a weakening in screening effect. In addition, the outcomes identified in the literature (reduced caseloads) may not be unequivocally positive, since benefits leavers may not enter work but instead be 'cycled' onto alternative benefits or in extreme situations into greater poverty.

A further service provided by the literature is the implicit support it gives to understanding the interaction between local circumstances, personal characteristics and national benefit rules. For example, as discussed above, local labour market demand and SREI follow a similar geographic pattern. Skills also matter, with the least qualified having a raised risk of becoming IB claimants and once SREI, a low probability of leaving for unemployment or work (Little, 2007; Larsson and Runeson, 2007). Older working-age people, and those in poorer health, also appear more susceptible to becoming IB claimants (Larsson and Runeson, 2007; Jimenez-Martin et al, 2007). How different parts of the benefits system interact also seems important. Among inactive males and females, receipt of IB dramatically lowers the odds of claimants moving into employment or unemployment relative to unemployment benefits. Housing benefits have a mixed effect, lowering the chances of inactive persons finding a job but increasing the prospects of inactive males moving from inactivity to unemployment (Little, 2007). There is also some evidence that policies implemented to head off moral hazard in the unemployment benefits system may have diverted some working-age people into SREI (MacKay, 1999; Webster, 2005; Manning, 2009). It may well be that moral hazard exists, but it does not emerge in a vacuum.

Finally, the results of benefits reforms to IB in the last decade can be examined to discern how successful attempts to reduce moral hazard are in practice. Between 2000 and 2010, two major changes occurred: the introduction of means-testing of IB for those in receipt of

occupational pensions and the roll-out of the Pathways-to-Work (PtW)[3] initiative across Britain (McVicar, 2009). Both aimed to stem the in-flow into IB. Evidence from Glasgow, a post-industrial city in Scotland, provides some evidence that the pensions rule change was partly successful, due to greater falls in in-flows to IB among the over-50s. The evidence for PtW and other activation programmes is more ambivalent. Early evaluations of PtW pilots found that its effect was very positive, boosting off-flows of IB by 8 percentage points (Blyth, 2006). Participation in New Deal for Disabled People (NDDP) and in more work focused interviews was associated with increased likelihood of being in work (Hayllar et al, 2010). On the other hand, evaluations of the expansion of PtW to other parts of the country were more equivocal, finding little or no evidence that these programmes had an impact on work outcomes in these areas (Bewley et al, 2009). Personal characteristics, especially health and age, were also more strongly associated with positive work outcomes than participation in NDDP. This should be considered along earlier evidence from the Restart programmes (which also aimed to boost employability through light touch counselling and advice). Dolton and O'Neil (1996) note that Restart participants had a significantly reduced unemployment duration compared to non-participants. However, there was no difference in the likelihood of returning to full time, stable employment between the two groups. This suggests that activation programmes may be effective in moving people off particular benefits but their capacity to create employment is much less certain.

2.3.4 Summary

Benefit systems for the working-age population attempt to strike a balance between social protection and work incentives. This is most obvious for unemployment benefits but becomes a muddier issue when thinking about benefits for the 'inactive', including the SREI. Recent British concerns are influenced, tacitly and sometimes explicitly, by US theorists such as Mead and Murray. There are concerns that a 'culture of despair' has been allowed to

[3] Pathways to Work is a package of financial support, training, personalised advice and condition management. It began as a pilot in 2003, and from 28 April 2008 the programme became available to everyone receiving incapacity benefits in Great Britain. Pathways to Work is operated in 60 per cent of Great Britain by the private and voluntary sector and in 40 per cent by Jobcentre Plus.

emerge at a neighbourhood level, with the benefits system then locking people into dependency. There are also worries that the benefits system itself provides perverse signals, by being too generous or offering something for nothing, thus directly damaging individuals' work ethic. Finally, there is a widespread attitude that the benefits system is poorly administered and open to abuse.

These issues have become increasing relevant to SREI because so many claim Incapacity Benefits. The evidence on the existence and causes of localised 'cultures of despair' is multifaceted and subject to bias. Accounts that propose a link between increased generosity and increased IB caseloads may have limited application for Britain, though more work may be needed to test these ideas. Lessons from moral hazard are more complex. Indeed, the overall lesson may be that welfare reform focused on changes to the administrative rules, without regard to varied social and economic circumstances, is unlikely to meet its objectives. Detailed examination of the context in which the IB benefits system operated may prove fruitful. This may include studying the interplay of Incapacity Benefits and Unemployment Benefits over time, and looking at local 'replacement ratios' and outcomes for benefit leavers.

2.4 The growth of sickness-related economic inactivity, family and neighbourhood effects

It may be that the growth in SREI was caused by the interaction of structural factors (labour market opportunity, the benefits system) with individual characteristics (employability, health[4]), but this process did not take place in a void. Some consideration needs to be given to the context, or intermediate factors, that facilitated this process. Families and local neighbourhoods are identified as being potentially very important here. For example, the 2006 DWP Green paper acknowledged that economic dislocation in the 1980s and 1990s was the initial trigger for high levels of worklessnes. However, it then went on to argue that as households and whole neighbourhoods adapted to their new situation, new subjective barriers to employment were being created:

> *"Too many families had suffered inter-generational poverty, with little expectation of work... communities had become breeding grounds for despair and low aspiration" (DWP, 2006b:14)*

There are clear echoes, and some overlap with, the ideas about a culture of worklessness discussed in the section on benefits. This section will discuss how two intermediate factors, family and neighbourhood, might help account for the growth of SREI in Britain, espcially among young adults.

2.4.1 Family effects

Family factors might influence growth in the number of young adults claiming Incapacity Benefits in several ways. First, the social and economic disadvantage associated with having a parent or parents on benefits may directly constrain an individual's opportunities (e.g. the ability to remain in education) and perpetuate disadvantage through low-income and poverty (Corcoran and Adams, 1995; Bäckman and Nilsson, 2007; d'Aggio, 2007; Furlong et al,

[4] Of course, health might also be understood as a structural factor, since population health is associated with broader social and economic circumstances (income inequality, poverty, gendered smoking patterns).

2003). In a recent analysis of two large-scale, longitudinal British cohort studies, the authors found that people who were poor as adolescents were much more likely to be poor at adults, and that the transmission effect strengthened between the 1970s and 1980s (Blanden and Gibbons, 2006).

The second cluster of explanations focuses more on parental employment status. Longer periods of employment by fathers seem to reduce those children's risk of young adult inactivity; the risk of young adults moving into the Not in Education Employment or Training (NEET) group is raised if at least one parent was unemployed (Raffe, 2003). This may be because parents not in work are less likely to have access to the information networks that might ease their children's transition into employment (Furlong et al, 2003). The timing of parental worklessness is also re-iterated in an important paper by Ermisch and Francesconi (2001). Using BHPS (British Household Panel Survey) data, they found that parental joblessness when a child is of pre-school age increase the latter's risk of inactivity. Parental joblesseses can also increase the risk of early adult inactivity indirectly, by impacting on childbearing decisions, health and education outcomes. Mothers' influence on this risk though their labour market status seems more complex, and dependent on timing. If mothers worked when their children were of pre-school age, this seemed to increase the risk; but if they worked after the child was of school-age, this seemed to reduce the risk.

Why parental employment status should have these effects is disputed. One view is that having the main breadwinner (or both parents) out of work creates a negative, self-perpetuating culture, where work is not seen as the norm. Young adult's expectations are diminished by absorbing such attitudes and their work ethic atrophies: this is certainly the view of Mead (see section 2.3.1). Such family effects may be reinforced because of perverse incentives in the benefits system and sorting effects in the housing market that concentrate people with similar characteristics together in the same communities (Murray, 1996; Centre for Social Justice, 2008; Conservative Party, 2008). Certain elements of this interpretation deserve attention. Research carried out by the DWP has argued that policy interventions to tackle worklessness might be more successful if they recognised family and community

pressures alongside individual motivations (Ritchie et al, 2005). The evidence on the transmission of a welfare dependency culture within families is more mixed (Martin et al, 1986; Baron et al, 2008).

An alternative view is that parental non-employment has a more indirect link on children's risk of economic inactivity through its disruptive social effects. Rowthorn and Webster (2008) argue plausibly that male worklessness was a key driver of of the rise in family breakdown and hence lone parenthood. Evidence from the BHPS also suggests that living in a non-intact family in childhood is associated with a range of labour market and health disadvantages in early adulthood, with the association less ambiguous than for parental joblessness (Ermisch et al, 2002). In this analysis, family fragmentation is the conduit between economic disruption in one cohort of people and increased levels of economic inactivity in another, closely associated group.

Based on the arguments above, it would seem reasonable to include family factors in any exploration of the reasons for young adults claiming Incapacity Benefits. Parental employment status, income and poverty and family fragmentation must be key candidates for consideration. In addition there are clear arguments for including measures that differentiate these measures by social class and local labour market. Social mobility in Britain was low in the 1980s and 1990s and non-employment among young adults is concentrated among those whose parents had a low social class (Blanden et al, 2005; Danson, 2005). Incorporating geography would be fully in line with the approach taken in the rest of this thesis.

2.4.2 Neighbourhood effects

Before discussing neighbourhood effects, it would be useful to define what a neighbourhood is. Some writers have defined neighbourhoods in physical terms, as limited geographic spaces with clear, albeit subjective, boundaries that can be easily traversed on foot. Others have understood neighbourhoods as a group of overlapping social networks as well a cluster

of dwellings, buildings and public spaces (Galster, 2001). Both elements have value, making it sensible to adopt Galster's definition of neighbourhood as *"the bundle of spatially based attributes associated with clusters of residences, sometimes in conjunction with other land uses"* (Galster, 2001: 2112).

Neighbourhood effects are the social and economic outcomes associated with living in a neighbourhood (Lupton, 2003). These occur because of the segregation of neighbourhoods and associated spatial concentration of poverty. Competition in the housing and labour markets are seen as the root cause of this concentration. As originally expressed by Wilson (1996) in the USA, the process begins with the labour market, with the loss of relatively well-paying entry level jobs from cities, creating spatial mismatch between the jobless and employment opportunities (Wilson, 1996). This is accompanied by skills mismatch, as new vacancies created may be a poor fit with the experience, training and attributes of the jobless. Housing effects then further concentrate poverty as better-off residents move out from inner-city areas to the suburbs (Corcoran, 1995). The costs of private housing in more advantaged neighbourhoods and the allocation of social housing as a system of 'last resort' means that neighbourhoods become less socially mixed over time (Atkinson and Kintrea, 2001; Dorling et al, 2007). Broadly, there are two routes by which concentrated disadvantage is thought to impact on individuals: distinct neighbourhood cultures or material deprivation (Atkinson and Kintrea, 2001; Corcoran, 1995).

Cultural arguments posit that since neighbourhoods are transmission belts for information, they might also act to transmit social norms or cultural behaviours to their residents (Durlauf, 2004; Galster, 2010). Such norms and behaviours might be positive or negative, and it is worth noting the substantial overlap here with the literature on 'cultures of worklessness' (see Section 2.3.2) and role-model family effects (though as noted below, as they arise as response to material conditions). 'Deviant' attitudes to work and benefits might be adopted as a survival mechanism to local deprivation. Reproduction of these attitudes and behaviours might then occur through peer effects, role-model effects (principally from parents) or socialisation (Atkinson and Kintrea, 2001; Galster, 2010). Peer and family effects suggest

some direct learning about 'how the world works', for example in the realistic prospects of securing a job or in how normal it is to remain in full-time education after a statutory leaving age (Durlauf, 2004). With socialisation, it may be more indirect, for example by observing how 'acceptable' certain behaviours are in the local community. Overcoming these cultures requires policies to break and discourage these deviant attitudes, through welfare reform and by promoting mixed communities through housing policy.

The second group of explanations for neighbourhood effects focus on the consequences of concentrated material deprivation. In the most disadvantaged communities, lack of material resources reduces parents' capacity to help their children develop social and educationally. Lack of successful role models severs the perceived link between educational attainment and success (Corcoran, 1995). The association between deprivation and degraded physical environments, worse health and relatively poor public services also constrains residents' prospects (Atkinson and Kintrea, 2001). While neighbourhood culture plays an important role in this argument, the crucial point is that it sees structural factors as the catalyst and culture and attitudes as an effect: if circumstances change, then the culture can also change, though often action may be required to alter both (Corcoran, 1995; Wilson, 2010).

Most published studies that have tried to quantify neighbourhood effects have suggested they exist, but their contribution to individual outcomes is imprecise (Durlauf, 2004). This may be because of the challenges involved in testing for neighbourhood effects. First, there is a lack of consensus over what neighbourhood attributes are most important in measuring neighbourhood effects (Durlauf, 2004). Data limitations compound this problem. Physical or institutional issues, for instance, may be very important in driving neighbourhood effects but suitable measurements are thin on the ground. Researchers may be forced to assume variables such as household or area deprivation are adequate proxies (Lupton, 2003). Second, there are difficulties in controlling for important individual characteristics. Addressing this seems especially important since *"the magnitude and statistical significance of neighborhoods effects is very sensitive to the choice of individual-level controls"* (Durlauf, 2004: 2218). In some cases, neighbourhood effects disappear entirely once appropriate

controls are included. Third, the geographic and social boundaries of neighbourhoods may differ according to the aspect of life (shopping, leisure, labour markets, housing) being considered (Lupton, 2003). Finally, there appears to be a lack of systematic research on what the appropriate size of a neighbourhood might be. Neighbourhood scale seems to be defined not by theory but by the smallest 'off-the-shelf' geographic units data is available at (Durlauf, 2004; Lupton, 2003).

How might neighbourhood effects relate to the growth in sickness-related economic inactivity in Britain? The first channel might be cultural, through peers, socialisation or role-models. Some studies provide some evidence of peer learning around Incapacity Benefits. However, this was limited in scale and seems unlikely to account for such large increases in the benefits caseload by itself (Houston et al, 2008; Pinkster et al, 2009). Whether SREI became normalised through socialisation effects is hard to discern, given the social stigma mentioned by many IB claimants and jobless residents of deprived communities (Houston et al, 2008; Crisp et al, 2009). As discussed in section 2.5.2, GPs and welfare providers have become less likely to shift people onto IB. In the case of GPs, family doctors were always only one gatekeeper among many, and their authority and status diminished over time (Wikeley, 1995). Welfare system providers also appear committed to the concept of hidden unemployment and that work is almost always the better option for many current SREI claiming benefits. Role model effects are difficult to prove or disprove. Only 14% of Incapacity Benefit claimants had dependent children in 1993, but it is worth reflecting that the number of children growing up in workless households in Britain increased by more than one million between 1979 and 2000 (Lonsdale, 1993; Dickens, Gregg and Wadsworth, 2001). Young adults growing up in such an environment have less resilience, poor parental role models and may also lack access to work experience. This then impacts on their prospects for employment and earnings (Bauder, 2002; Holloway and Mulherin, 2004). So it may be that while peer and socialisation effects are small (and institutional socialisation effects appear to have diminished over time), it would be worth exploring role model effects in more detail.

Competition for scarce resources (housing and jobs) is also relevant to thinking about the growth of SREI in Britain, though labour market change provides a more plausible narrative. There is an abundant literature on the spatial and skills mismatches that occurred across the country in the last 30 years and the consequences for sickness-related economic inactivity. The work on the coalfields provides a good example of this (Beatty and Fothergill, 1996; Beatty et al, 2007). Other authors describe in detail the widening gap in employment opportunity between older industrial parts of Britain and more thriving labour markets, located principally (though not exclusively) in the South East of England and parts of the East Midlands (Rowthorn, 2000, MacKay and Davies, 2008). Neighbourhood can be effective transmission belts for information (for example, about job opportunities) – but where greater numbers of people are out of work in a particular neighbourhood, reliance on these transmission belts may be less useful (Durlauf, 2004; Atkinson and Kintrea, 2001). It may be that what are described as neighbourhood effects – local labour markets having an impact on the people who live there – may simply reflect the selection of the poorest into certain neighbourhoods through housing markets: 'sorting effects' (Lupton, 2003). Incapacity Benefits claimants are more reliant on social housing: more than four in ten rent from their council or another social landlord, compared to one in five in the general population (Beatty et al, 2009b; ONS, 2010). There is some evidence that concentration of IB claimants in social housing increased over time (as share in other tenures fell), though this was also accompanied by growth in private renting. There is also some evidence of greater segregation of neighbourhoods over time (Dorling et al, 2007). But since this means that a majority of IB claimants are not living in social housing, it seems unlikely that the polarisation in SREI can be attributed to sorting effects alone, especially as sorting effects occur within housing markets rather than between them.

Concentrated material deprivation might offer a more straightforward explanation for the growth of SREI. This might be direct, through the association between deprivation and poor health. Numerous studies have highlighted the gradient in physical and mental health by area deprivation (Reijneveld et al, 2000; Taulbut et al, 2009). The association is not always linear either, with evidence that some health problems, especially those related to substance misuse,

are exponentially greater in the most deprived areas (Griffiths et al, 2008, Taulbut et al, 2009). Neighbourhood characteristics may also be associated with perceived fear of crime, which may further raise the risk of anxiety and depression among residents (Aneshensel and Sucoff, 1996). It may also be indirect, through the interaction between material disadvantage and neighbourhood culture described by Wilson and others above. Deprivation may increase the risk of joblessness, which may in turn present a range of fresh difficulties. Unemployment is associated with general mental health problems (such as depression and anxiety (McLean et al, 2005). In addition, where links to the formal economy are scarce, illicit drugs markets may develop more readily. Area poverty might reduce the protective factors and raise the risk factors associated with problematic drug use, so local demand might be increased (Shaw et al, 2007). Young adults may be particularly at risk.

Finally, higher demand on public services in deprived areas may mean that (even with an equal per capita distribution), the quality of services may suffer (Atkinson and Kintrea, 2001). One potential route for this to influence SREI might be the inverse care law. Originally advanced by Tudor-Hart (1971), this argued that: *"the availability of good medical care tends to vary inversely with the need for it in the population served."* (Tudor-Hart, 1971: 412). There is some evidence that an inverse care law exists. Though some studies have found that geographic access to care is better in more deprived areas (Jordan et al, 2004), most research has found that the quality of primary care being delivered is negatively related to area disadvantage (Ashworth and Armstrong, 2006). Despite patients in the most deprived neighbourhoods having more problems to discuss, average appointment lengths were shorter when compared patients in less deprived neighbourhoods. GPs in more deprived areas were also more likely to report feeling stressed, which may also have a bearing on health in these communities (Mercer and Watt, 2007). However, it is unclear how this might translate into the growth in SREI, especially since it would be difficult to establish if the relative quality of care in deprived neighbourhood changed over time. Neighbourhood effects may contribute to reinforcing the spatial concentration, and growth over time of SREI, but it is less plausible that they are the major driving force.

2.4.3 Summary

Neighbourhood and family effects may have influenced the growth of SREI in Britain in several ways. Some authors emphasise the detrimental impact of social and economic disadvantage. Poverty experienced at a household or area-level is often disadvantageous to educational attainment, health and labour market status, especially for young adults. Structural change may also promote family break-up, increasing the risk factors for negative health and well-being for children and adolescents in those families. In deprived neighbourhoods, families under strain may lack the material and emotional resources to help their children develop resilience. This may be more problematic where local drugs markets developed in deprived communities. Inverse care laws may also mean that the scale of health need in such communities is not adequately addressed. Increased spatial and skills mismatch and the mental health problems associated with living in deprived neighbourhoods appear to the most credible neighbourhood effects driving SREI in Britain. Peer and role model effects may have increased over time as the number of workless households rose. The impact of socialisation, service quality and housing is unknown, though where the evidence does exist it suggests these factors played a weak and declining role in the growth of SREI.

2.5 The growth of sickness-related economic inactivity and health

Yeandle and Macmillan (2003) propose four main ways of thinking about the way health might have influenced the growth of sickness-related economic inactivity in Britain. First, the phenomenon might reflect a real increase in the number of working-age adults suffering from health problems. Second, changes in benefit system rules might have made it easier to claim Incapacity Benefits (see section 2.3). Perhaps related to this, people may have learned to use a health condition, quite legitimately, to gain access to IB if they reasoned that their prospects of work were poor, so that it eased the transition between early retirement and their state pension. Third, there might have been a rise in the number of fraudulent claims. Finally, a change in economic circumstances might have resulted in previously concealed sickness becoming visible, though the precise mechanisms for this vary. This section will mainly focus on the first and last of these explanations.

2.5.1 Population health trends over time

Many commentators are sceptical that the growth of SREI in Britain reflects any deterioration in health, given the steady rise in national life expectancy over the last 30 years (Bell and Smith, 2004). While it is true that for the general population life expectancy has increased, this does not necessarily translate into improving health for all. In England during the 1990s, healthy life expectancy (years spent in good health) remained unchanged between 1994-1999 across all deprivation deciles (Bajekal, 2005). Analysis of the British Household Panel Survey in the 1990s found that a small increase in healthy life expectancy for men but no increase for women (Khoman et al, 2008). On self-rated health too the picture is ambiguous. The proportion of the population aged 25-69 rating their health as fair or poor increased between the 1980s and 1990s according to the General Household Survey for all income groups, but decreased in the same time period if data from alternative surveys covering England only is considered (Kunst et al, 2005). In Britain, relative inequalities in premature mortality were remarkably persistent at a regional level and increased at a district level during the 1980s and 1990s (Mitchell et al, 2000; Leyland, 2004). Since 1972, the General Health Survey (GHS) has asked a number of questions on self-perceived health. Between 1981 and 2000, the percentage of adults reporting they were in good health showed no clear trend, though the proportion of adults aged 45-64 reporting they had a long-term limiting illness increased from 12% to 18% (Walker et al, 2002).

Selective migration patterns may also partly account for the higher than expected growth in SREI in some parts of Britain. Since migrants are more likely to be young and healthy, areas affected by large-scale out migration may see their average health deteriorate relative to areas with large in-migration flows (Bentham, 1988). Selective out-migration may account for half the increase in geographical disparities in mortality between deprivation deciles in England and Wales for the under-75s (Connolly et al, 2007). In addition, Norman et al (2005) found that those migrating to less deprived areas had better health than the local population, while the reverse was true for migrants to more deprived areas. This was mitigated only very slightly by the smaller numbers of unhealthy migrants moving into less deprived areas. By itself though, this is fully consistent with the 'hidden unemployment' thesis, which does not

require any deterioration in health, but merely existing health problems becoming visible though benefit claims.

Nevertheless, for some segments of the population an absolute worsening of health appears more plausible in driving sickness-related economic inactivity. There is evidence that in some post-industrial regions of Britain (Merseyside, Swansea and the South Wales Coalfields and the West of Scotland) mortality rates for younger adults (aged 15-44) actually increased in absolute terms during the 1980s and 1990s (Walsh et al, 2008). Scottish research covering the period 1981-2001 also confirmed that mortality rates increased among young adults during these decades, with the rise especially notable in the Clydeside conurbation (Leyland et al, 2007). Qualitative research in former industrial parts of Britain also concludes that where industrial employment was lost, this often led to the replacement of industry-related health problems with others related to worklessness, deprivation and inequality (Beynon et al, 1999; Charlesworth et al, 2004). As for mental health, there have been two large scale population surveys conducted to gauge the prevalence of neurotic symptoms and substance misuse over time in Britain. These report that between 1993 and 2000, the proportion of adults with a Revised Clinical Interview Schedule (CIS-R) score of 12+ (indicating significant psychiatric morbidity) increased by a statistically significant, but modest, amount: from 15% to 16% (Singleton et al, 2001).

External factors may also have contributed to the worsening of health among the unemployed, both directly and indirectly. The growth of sickness-related economic inactivity in Britain occurred against a backdrop of unemployment levels that were both very high by historic levels and persistent throughout the 1990s. Hatton and Boyer (2005) estimated that British unemployment rates over the 1974-1999 period averaged 10.1%: nearly five times that seen during the Bretton Woods era. Unemployment is known to have a particularly damaging impact on health. A systematic review of the literature conducted by the Health Development Agency found a relationship between unemployment and poor health, with the association especially strong between unemployment and psychiatric morbidity (McLean et al, 2005). For men, chronic unemployment is also associated with an increase in health-

damaging behaviours, such as reduction in sleep duration and increased alcohol consumption (Virtonen et al, 2008). Health also appears to change in line with economic activity. Movement from stable employment to unstable unemployment or chronic unemployment is associated with decreased levels of physical activity for women and reduced sleep duration and higher levels of alcohol consumption for men (Virtonen et al, 2008). Conversely, a recent large-scale analysis of German data suggested that moving from unemployment to unsubsidised employment had a positive impact on health, with the effects especially marked for men who had previously reported the worst levels of health (Huber et al, 2009).

In theory, welfare states might act to cushion the health-destroying effects through financial assistance, though their protective effects vary by the type of benefits system and by the characteristics of recipients. Means-tested benefits regimes, whose rationale is to encourage job search and prevent absolute poverty, are ineffective at maintaining self-rated general health and are associated with a deterioration in mental health among the long-term unemployed (Strandh, 2001; Rodriguez, 2001). By contrast, there is growing evidence that more generous benefits systems *"clearly diminish"* the worst effects of unemployment by preventing continued falls in mental well-being (Strandh, 2001). These findings appear to hold across a range of self-reported health measures and welfare state types, though the lessons for health are starkest in Anglo-Saxon economies and for women (Bambra and Eikemo, 2009). The low value of British unemployment benefits in the 1980s and 1990s, in the context of mass unemployment, is unlikely to have protected the mental health of the unemployed and may have indirectly contributed to rising IB caseloads.

2.5.2 Fraudulent and inappropriate claims

Although the literature on the benefits system is considered in more detail above (see section 2.3) it is worth briefly addressing the concern that the IB system is open to widespread abuse. As far as I can ascertain, only one official review has been carried out to determine the extent of fraud and error in Incapacity Benefits in Britain. That review, published in 2001, concluded that the level of fraudulent claims for these benefits was extraordinarily low, accounting for less than 0.1% of the caseload (DWP, 2001). This compares with the most

recent estimates for fraud in Job Seeker's Allowance and Income Support (2.3%) and Housing Benefit (1.0%). Since the IB estimates are drawn from a one off review (rather than the continuous measurement that Housing Benefits, JSA and IS are subject to), it could be argued that this is an inadequate measure of inappropriate claims on its own. Despite serious public concern about the issue (DWP, 2004) the case for widespread fraud remains at best unproven.

On occasion, the debate has emphasised the role of gatekeepers (especially GPs and benefit officials) in encouraging or acquiescing in uptake of IB. There is some evidence to suggest that this was more common in the past (NAO 1989; McCormick, 2000; Houston et al, 2008; Webster et al, 2010). Whether it is still a major explanatory factor is less clear. Qualitative surveys with IB claimants provide a mixed picture. Sainsbury and Davidson (2006) found little evidence that recent claimants felt GPs and benefits officials were 'pushing' them towards claiming IB. On the other hand, Houston et al (2008) found that advice from a family doctor or practice nurse advice may have acted as a catalyst for an initial claim among women on IB. Some GPs also report that they or their colleagues are reluctant or unable to prevent patients drifting towards long-term Incapacity Benefit claims, because of lack of occupational health training and a concern not to jeopardise the patient-client relationship (Money et al, 2010). In some locales, Job Centre Plus Officials maintain that GPs' lack of knowledge about the availability of appropriate job opportunities might be inadvertently contributing towards a sick-note culture (Houston et al, 2008). Sifting such competing claims is far from straightforward, though a majority of GPs and benefit officials now express a strong preference to help patients and claimants maintain or regain employment rather then divert them to Incapacity Benefits (Houston et al, 2008). Moreover, the key problem with IB that emerged in the 1990s was increase in claim duration, not substantial changes in in-flow (McVicar, 2008).

A related theme to the gate-keeping issue is to emphasise the nature of the conditions identified by claimants: initially dominated by musculo-skeletal disorders in the early 1990s, these have shifted over time to common mental health problems such as stress and depression

(Moncrieff and Pomerleu, 2000; Brown et al, 2008). Such conditions are notoriously hard to diagnose: there is a suspicion that this pattern reflects 'justification bias' and that many claimants are really fit to work (Thomson and Sylvester, 2008). Under both the All-Work Test (1995-2001) and the Personal Capability Assessment (2001-2008), it was easier to claim for physical complaints than mental health problems (Prior et al, 1996; DWP, 2006a). Yet this was precisely the period during which IB claims for the latter increased. Moreover, musculo-skeletal disorders and mental health problem often overlap and interact: the relationship between these health problems appears to be two-way, with anxiety and stress being risk factors for chronic back pain, and those suffering from musculo-skeletal disorders often having higher rates of anxiety and depression (Bevan et al, 2007; Parkes et al, 2005).

2.5.3 Health as an explanation: a red herring?

For those writing from a labour market demand perspective, it is the change in economic circumstances that mattered: in different conditions, individuals with these health problems might well be in employment. For example, Beatty et al (2000) argue that in buoyant economic times and local labour markets, a lot of sickness is 'hidden' because these people are in work, but in a downturn, they are among the first to lose their jobs. Some will become visible in the numbers affected by sickness-related economic inactivity immediately, though others will continue looking for employment and show up as unemployed. However, because their health problems place them near the back of the queue for jobs, they are less likely to secure fresh employment – and some may well become disillusioned and move onto long-term sickness benefits (for which they are eligible). Others have concluded that since the reduction in economic activity was concentrated among the least-qualified with health problems, the roots of the problem may lie in skills, choice of occupation or the interaction between benefits, wages and limited employability (Faggio and Nickell, 2005; Bardasi et al, 2000). While labour market issues were crucial to driving these trends, focusing on them so strongly does risk marginalising the real public health issues identified in the literature.

From the welfare policy perspective, it makes sense to emphasise that many people are claiming for conditions that are, on the surface, manageable and less serious (DWP, 2007a). There are major problems with such assumptions. First, there is good evidence that health

problems are severe and limiting for all but a small minority of those affected by sickness-related economic inactivity. An analysis of data from the 1998 Welsh Health Survey found that only about 5% of the disabled had health problems that were comparable in severity to the non-disabled population, with another 15% being 'mildly disabled' (Jones and Latreille, 2009). In an important paper, Berthoud (2008) confirms that the distribution of employment likelihood for those with a disability is completely different for those without: while 80-90% of the general population have good employment prospects, few of the disabled group had good prospects and a majority had very low rates of employment. Moreover, while for the general population it was family structure and age that was most important in determining employment prospects, for the disabled population it was the severity of the condition faced (Berthoud, 2008). In a tacit reference to the Government strategy 'work for those who can, help for those who cannot', he concludes that *"there is no obvious point in the sequence where a dividing line could be drawn between 'can' and 'cannot'"* (Berthoud, 2008: 143).

It is possible that working-age Incapacity Benefits exaggerate their health problems in order to justify (to themselves and their peers as much as the benefits system) their economic status. This is sometimes referred to as 'justification bias'. However, arguments for 'justification bias' are weakened by the high correlation between objective and subjective measures of poor health. Using the 1998 Welsh health Survey, Jones and Latreille (2009) found a high level of consistency between more 'subjective' measures of self-reported health and a more objective measure of physical and mental function at a local authority level. Norman and Bambra (2007) looked at the association between three Census measures of working-age health (limiting long-term illness, permanent sickness and disability and general health) and the concentration of IB claimants across all British local authorities and found these measures to be highly correlated with each other. Given this association, it is telling to note that Mitchell et al (2000) found a sharply increased likelihood of reporting five or more health symptoms among those describing their economic activity as permanently sick.

Health problems also remain highly spatially patterned, whether the preferred measure is morbidity or mortality: the overlap with local labour markets with high rates of sickness-

related economic inactivity is extremely high. Jones and Latreille (2009) examined three measures of morbidity (self-reported general health, limiting long-term illness and a more objective 'composite' measure of physical and mental symptoms, the SF-36) across all Welsh local authorities. They concluded that in Wales: *"some local areas suffer disproportionately with a double policy hurdle of a large disabled population and a more significant population that are without work"* (Jones and Latreille, 2009: 208). Similarly, in 2001 those local authorities in Britain with the highest IB claimant rates were among those with the worst health as measured by Census measures (Norman and Bambra, 2007). Bajekal et al (2002), who explored healthy life expectancy (HLE) at Health Authority level in England, found a familiar and consistent spatial pattern, with much of the South and East of England (outside of London) showing the highest HLE, and the North and West having much lower HLE, especially in the big cities.

2.5.4 Summary

Aggregate improvements in life expectancy in Britain conceal a more ambiguous picture for morbidity and persistent health inequalities by geography and age group. The health problems faced by benefit claimants are real and present a challenge in their own right when thinking about the growth of sickness-related economic inactivity in Britain. There is no evidence of widespread fraud among IB claimants. High structural unemployment in Britain, and a benefits regime with limited concern about keeping the unemployed healthy, may also have combined to contribute to growth of SREI. While the original cohort moving into sickness-related economic inactivity fits a traditional view of an older craftsman, perhaps with industrial injuries or illness, the second wave (younger, and with more of a gender balance) may have been influenced by newly emerging health problems (especially those related to mental health problems) as much as labour market issues. Disaggregating health issues by geography and time seems important in exploring these issues.

2.6 Sickness-related economic inactivity and employability

Concerns about the 'employability' (or otherwise) of more marginalised groups in the British labour force, and resultant social and fiscal consequences, are not necessarily new (Welshman, 2006). However, since the late 1990s, the notion of 'employability' has been invoked by policy-makers as a means of addressing worklessness (HMT, 2000; DWP, 2007a). In a key paper, Hillage and Pollard (1998) suggest that, in broad terms, employability reflects the capacity to gain and maintain fulfilling employment, and to manage the transition to new employment if circumstances change. At the individual level, employability embraces an individual's knowledge, skills (including both soft skills such as team working or the ability to communicate effectively, alongside formal academic and vocational qualifications) and attitudes. It also reflects the way they deploy these assets to negotiate the labour market and their capacity to present the employability 'package' to employers. Employability is also determined in part by the context (personal circumstances and labour market environment) within which the individual is situated (Hillage and Pollard, 1998).

In a 2005 paper, McQuaid and Linsay discuss the concept of employability and its current status in the British labour market. They conclude that while a broad notion of employability should encompass external factors (especially labour market demand) and the appropriate mix of skills and personal attributes possessed by individuals, official views focus almost exclusively on the latter. Most of the external, and some circumstantial, aspects of this broad employability matrix are discussed in more depth in other sections of this chapter. Here the concern is with those aspects of narrow employability (specifically, individual skills and attributes, demographic factors, health and wellbeing, job seeking and adaptability and mobility) which may be important factors in explaining the growth of sickness-related economic inactivity in Britain.

2.6.1 Employability skills and attributes

It is difficult to make a definitive, objective assessment of the essential attitudes (basic social skills, presentation, positive attitude to work, self-discipline etc.) of those affected by SREI. To the author's knowledge, no studies have tried to measure these skills directly among this sub-group of the economically inactive. However, some clues can be teased out from the existing literature. Employers rate soft or non-cognitive skills (especially interpersonal and communication skills) as very important when recruiting the unemployed and inactive (Newton et al, 2005). Several studies have highlighted the low levels of confidence as well as literacy and numeracy problems among some of those on Incapacity Benefits (Beatty et al, 2009b; Kemp and Davidson, 2007), which might be a potential indicator of poorer communication skills. In turn this might suggest employers may be less willing to recruit them, though it may be unwise to overstate the value of these soft skills on employment status. Studies applying more rigorous measures of interpersonal skills (agreeableness and extraversion) have found mixed results. Derya-Uysal and Pohlmeier (2009) found neither skill had an impact on labour market status when other factors (e.g. demographics, educational attainment, industrial and occupational background) were controlled for. Viinikainen et al (2010) found that only extraversion (but not agreeableness) was significantly positively associated with income. Nonetheless, given the extent to which employers emphasise these soft skills, original research on the SREI in Britain should include more direct measures of them.

One aspect of this facet of employability – desire to work – has been considered by a range of studies. Although those affected by sickness-related economic inactivity are unlikely to be currently looking for and available to start work, there is evidence of a desire to return to the labour market at some point in the future. Several studies have explored how 'close' Incapacity Benefits claimants are to their labour market (Beatty et al, 2009; McGregor et al, 2003, Kemp and Davidson, 2007, Blackaby et al, 2004). While acknowledging that is, at least in part, a hypothetical exercise, drawing together these estimates can shed light on the numbers who might represent the 'hidden unemployed'. An obvious approach is to ask those affected by sickness-related economic inactivity. However, as discussed elsewhere in relation to the Labour Force Survey, 'want work' questions can be interpreted in several ways

depending on whether people chose to answer realistically or idealistically (Guinea and Betts, 2003). To get round this problem, researchers have generally asked a range of questions, covering aspirations and current status, along with health and labour market questions.

Table 2.3 summarises the range of estimates available, focusing purely on self-assessed proximity to the labour market. The data is drawn from four surveys conducted in Great Britain between 2003 and 2007 among those who attributed their economic inactivity to sickness. Between a fifth and a quarter of this group were currently engaged in the labour market, either in terms of wanting a job immediately or having a job to return to. If those with an aspiration to work at some point in the future are included, the proportion increased to perhaps four in ten. Approaching this from the opposite end of the spectrum, around a quarter of recent IB claimants suggest that they were unable to work at all. The breadth of proportions given suggests that willingness to work is there among many claimants but that for many it is severely tempered by their immediate circumstances. These surveys demonstrate the challenges of producing a definitive estimate of 'hidden unemployment' among the SREI.

Table 2.3: What proportion of working-age people affected by sickness-related economic inactivity in Britain might work?

Proportion	Survey data
60% plus	• Just 27% of recent IB claimants described themselves as permanently unable to work because of their health condition or disability or that they did not expect to work in future (Kemp and Davidson, 2007) • Less than a quarter of men and women claiming IB reported they couldn't do any work (Beatty et al, 2009b)
41-59%	• 47% of those leaving IB benefits in 2004 moved into employment (DWP In-house report, 2005) • 42% of non-JSA claimants (who were not lone parents) in Glasgow City were not looking for work at all (McGregor, 2003)
25-40%	• 40% of non-JSA claimants were currently looking for work or thought this was a definite possibility in future (McGregor, 2003) • Close to a third of recent IB claimants would like a job now or sometime (unspecified) in the future (Beatty et al, 2009b) • 28% of inactive long-term sick interviewed in Wales were not currently seeking but wanted work in the future (Blackaby et al, 2004)
1-24%	• Fewer than a fifth of men and women claiming IB would like a job now (Beatty et al, 2009b) • Among recent IB claimants, 24% were currently working, have a job to go back to or were waiting to start their new job (Kemp and Davidson, 2007) • 18% of non-JSA claimants were currently looking for work (McGregor, 2003)

Sources: Beatty et al (2009); Blackaby et al (2003); McGregor et al (2003); Kemp and Davidson (2007).

Beatty et al (2009b) interviewed 3,629 men and women across eight districts of England.

Blackaby et al (2004) interviewed 1,294 inactive people across three labour market types of Wales, half of whom were long-term sick and disabled.

McGregor et al (2003) interviewed 296 non-JSA claimants in Glasgow City.

Kemp and Davidson (2007) interviewed 1,843 recent IB claimants in 2007.

Most *personal competencies* (such as self-motivation, pro-activity) among the working-age long-term sick and disabled are left unexplored in the literature, though it might be possible to infer something from how confident this group are about returning to the labour market.

More than one in ten (12%) of recent IB claimants reported that lack of confidence was a barrier to returning to the labour market, rising to one fifth of those with less permanently disabling health problems and one-third of those with mental health problems (Kemp and Davidson, 2007). Moving on to *basic transferable skills*, more than a fifth of recent IB claimants had either literacy problems, numeracy problems or both (Kemp and Davidson, 2007). This is likely to be problematic. Although such basic skills are mentioned less frequently by employers as forming a barrier to recruitment, this may be because such skills are considered so essential by employers they would not consider recruiting someone without them (Learning and Skills Council, 2008). Further, core skills in mathematics and reading appear to play a greater role in helping individuals secure employment even after adjusting for attitudes, motivation and soft skills (Newton et al, 2005; Machin et al, 2001). The long-term sick and disabled may therefore require support to build their confidence and in some cases, address deficits in literacy and numeracy.

Employers are also concerned with higher level transferable skills among potential recruits. After practical and technical skills, 'soft skills', such as communication, problem solving, planning and customer handling were seen as very important. The precise balance within soft skills sought and between hard and soft skills varies by occupation type. Soft skills were viewed as on a par with, or more important than, hard skills for sales, personal service and to a lesser (extent) elementary occupations. Technical and practical skills take precedence for skilled trades and operative occupations. When recruiting from the unemployed and economically inactive, a similar pattern holds, with soft skills taking precedence over formal qualifications, except when legislation intervenes (Newton et al, 2005). The continued shift away from manufacturing and towards services is also likely to have resulted in a reduction in demand for technical and practical skills and a relative growth in demand for soft skills.

It is difficult to make a direct assessment of soft skills among the SREI. Items asking individuals to rate their ability at communication, team-working and problem solving have been included in several rounds of the British Cohort Study 1970, but no analysis of the sickness-related economically inactive subgroup has yet been published. IB claimants' long

spells without work, may however, discourage employers, since employers' perceptions on soft skills are shaped at least in part by recent, demonstrated work experience (Newton et al, 2005; Kemp and Davidson, 2007).

The last three aspects of employability skills and attributes – qualifications, work knowledge base and labour market attachment – are at least easier to measure. Those affected by SREI are likely to be considered less employable if rated solely by their formal qualifications. Recent IB claimants were twice as likely as the general population to have had no academic or vocational qualifications (34 per cent compared with 14 per cent (Kemp and Davidson, 2007). Personal characteristics can also interact to produce either to produce cumulative risk of non-employment or to offset other disadvantages. For example, the highly-skilled among the disabled face far better employment prospects than those with a disability and low levels of education (Berthoud, 2008). Work knowledge base is likely to be mixed: among recent IB claimants, half had last worked in last year, 11% not worked in last 10 years and 7% had never worked. In terms of attachment, almost two-third (64%) had spent most of their working life in steady jobs, while 13% had spent most of their working life in and out of jobs (Kemp and Davidson, 2007). However, given the lengthy duration of their benefit claims, the passage of time and workplace changes may have rendered their experience less relevant (Danson, 2004). Over the last decade or so, the IB cohort has become more diverse, with a greater mix of occupations in unskilled and 'person-focused' occupations (Beatty and Fothergill, 2007; Kemp and Davidson, 2007; Lonsdale et al, 1993). But even for this group, increased gender equality and a dwindling relative share of jobs for the less skilled mean competitive pressures have changed form, not disappeared (Beatty et al, 2009b). On the basis of work history and qualifications alone, labour market re-integration will be extremely challenging for the sickness-related economically inactive.

2.6.2 International migration and SREI

Some commentators have argued that the scale of migration by workers from the Accession Eight (A8)[5] countries since 2004 provides evidence that the issue is not about demand but about the willingness and ability of the domestic workforce (including the SREI) to compete for available vacancies. Reflecting on the increased migration to the UK, the DWP (2007) argued that:

> *"[T]he availability of skilled and flexible workers from abroad does not in any way reduce the need for us to improve the skills of our own population...Migrants have shown that the jobs opportunities are there"* (DWP, 2007a: 9).

This is at least partly misleading, since there is a spatial mismatch between local labour markets that have seen the largest growth in their immigrant workforce and those with large numbers of working-age people on Incapacity Benefits. Analysis of Worker Registration Scheme (WRS) data shows that A8 migrants are concentrated in greatest numbers relative to the local population in Central London, rural Scotland, the East of England and the East Midlands, where the percentage of working-age people claiming Incapacity Benefit claimants is relatively low. Migrants are much less concentrated in South Wales, Merseyside, Tyne and Wear, South Yorkshire and West Central Scotland – geographies with a relatively high percentage of IB claimants (Bauere et al, 2007; Beatty and Fothergill, 2005). This is underlined by the new evidence presented in Chapter 4, showing that migrants were most likely to locate to Greater London or the counties of Prospering Britain. Where labour demand was buoyant, migrants would have helped employers to fill vacancies, especially in sectors or occupations (e.g. agriculture, hospitality and catering) which were less attractive to the domestic labour force (DCLG, 2011), boosting output. There is also some evidence that migration may also have helped restrain wage pressures at the bottom end of the labour market, either directly through competition or indirectly through fear of unemployment (Blanchflower and Shadforth, 2009; Dustmann et al, 2007). Both measures are likely to have

[5] The A8 countries comprise the Czech Republic, Slovakia, Poland, Hungary, Slovenia, Latvia, Lithuania and Estonia.

increased productivity and created further demand for labour. Where large numbers of migrants were absorbed into the labour market, the increase in population and spending power may have stimulated a further round of job creation. However, this stimulus to demand is likely to have been reduced by savings and remittances and much more limited in scale in many of the Conurbations and Coalfields and Industrial Legacy Areas.

The characteristics of international migrants are likely to make them a more attractive proposition than local sources of labour. However, this may owe at least as much to a favourable mix of personal characteristics (age, health) and work assets (experience, soft and hard skills) as to beliefs and values (such as a work ethic). Drawing on published surveys of A8 migrants across six cities and three semi-rural areas, Table 2.4 compares their 'employability' with Incapacity Benefit claimants. Although they have a similar occupational profile, compared to IB claimants, migrants have more recent work experience, are younger, healthier and have higher level qualifications which may boost soft skills. Language skills may sometimes a barrier among migrants but it should be remembered that many SREI also have poor literacy or numeracy problems. Some of these deficits could be addressed, though others (such as housing tenure and health problems) may be more substantial barriers. Altogether this suggests that the ability of migrants to find jobs should not be taken as evidence that many SREI would find themselves at the head of the queue for jobs if only they increased their search intensity.

Table 2.4: Comparing the employability of A8/A2 migrants and IB claimants in Britain

	Migrant workers	***Incapacity benefit claimants***
Age profile	• *59% - 86% < 35*	• *20% - 30% < 35*
Health	• *9% - 16% have current health problems*	• *100% have current health problems*
Housing Tenure	• *55% - 85% private renters*	• *14% - 15% private renters*
Qualifications	• *1 - 11% no qualifications* • *15% - 30% degree*	• *34% - 60% no qualifications* • *2% - 11% a degree*

Sources: Beatty et al (2009b); Blake Stevenson (2007); Fife Research Co-ordination Group (2007; Glossop and Shaheen (2009); Hall Aitken (2007); Kemp and Davidson (2007); Lee-Treweek et al (2008); Scullion and Morris (2008); Scullion and Morris (2009); Scullion et al (2009).

Lastly, employers' practices and job content also remain relevant. Employers provide a range of reasons why they recruit migrants. While a few mention bad experiences with domestic workers or job applicants, they also value the availability and flexibility of migrant workers (Dench et al, 2006). The availability of workers may reflect the ability of migrants to re-locate at short notice (reflecting their greater concentration in private rented housing, age and fewer family ties). A8 migrants are also much more likely to use recruitment agencies and social networks, and less likely to use the Job Centre, to secure employment than domestic workers (Frijters et al, 2003). Flexibility may mean living in substandard and overcrowded accommodation, accepting work with a low degree of autonomy, physical demands or emotional stresses and, in some cases, unethical or illegal behaviour from employers e.g. paying below the minimum wage, unreasonable deductions from pay and a lack of concern with employees work-life balance (Anderson et al, 2007; Dench et al, 2006; Spencer et al, 2007). As noted elsewhere, employment in low-paid insecure work is often associated with higher levels of stress, risk of poverty and lower levels of wellbeing (Gallie and Paugam, 2002). If the SREI are to be encouraged to compete for vacancies under these circumstances, then attention should be paid to the potential impact of these issues on their physical and mental health and how sustainable this labour market model is.

2.6.3 Demographic characteristics

Personal characteristics (such as age and sex) are also relevant when considering sickness-related economic inactivity. Employers' opinions of potential recruits are often based on stereotypes, with those aged over 50 being particularly disadvantaged (Metcalf and Meadows, 2006). The perception of ageism is shown by interviews with long-term unemployed and inactive people, though their perception is that age discrimination may begin among younger age groups (Clasen et al, 1998; Fothergill and MacMillan, 2003). Since nearly a quarter of recent IB claimants are over the age of 50 and nearly half over the age of 45, this may damage employability prospects among this group. A more gender-balanced, and younger, cohort may offer some advantages to employers, with employers likely to believe that young people are more malleable and ready to learn new job skills. On the other hand, these might easily be offset by the lack of experience among younger IB claimants. For certain occupations, employers may be reluctant to recruit people with childcare responsibilities (Newton et al, 2005). Women on IB, especially lone parents who were

shifted from Income Support to Incapacity Benefits, may face an additional hurdle here (Beatty et al, 2009b).

Demographic markers such as age and sex may also interact with social class. Employers may perceive certain types of individual – young, white, middle-class females – as being most employable in terms of soft skills (Gordon and Turok, 2005). For those whose demographics are more distant from this ideal, such perceptions can be particularly damaging to self-esteem. Pressures to adopt an entirely new set of values and norms may discourage this cohort from seeking work or reduce their 'cultural capital', and perceived employability, among employers (Charlesworth et al, 2004; Helms and Cumbers, 2006). Given the persistent association between low social class and SREI (Moncrieff and Pomerleu, 2000, Kemp and Davidson, 2007), such challenges matter as much for the SREI as they do for the long-term unemployed.

Before concluding, it is worth reflecting on the view that a key demographic characteristic of IB claimants, their older age profile, might solve the challenge of SREI through natural means. These 'cohort effect' arguments point to the ageing of former miners and steelworkers and their passage into retirement, where they claim pensions instead of IB. Although this is undoubtedly happening (see Beatty and Fothergill, 2007), the evidence suggests it played only a peripheral role in the caseload reduction. Analysis of trend data for Glasgow City, where one-fifth of the working-age population claimed IB in 2000, found that the rate at which people left IB remained largely unchanged among the over-50s but rose steeply among younger age-groups (Webster et al, 2010). This suggests that this is not a problem that will resolve itself through demographic processes alone.

2.6.4 Summary

If individual aspects of employability are considered, those affected by SREI appear to be disadvantaged in the labour market. Few studies have examined soft skill and attributes (such as communication, confidence, team-working and problem-solving) among the SREI directly. However, many SREI have been detached from the labour market for long periods of time. Even if their soft skills have not deteriorated, employers may assume that they have. Many studies have looked at subjective willingness to work among the SREI, though the range of estimates produced is very wide. Harder aspects of employability, such as qualifications and work history, put the SREI at a consistent disadvantage in the competition for jobs (though this of course considers the SREI in aggregate). Finally, the changing demographics of SREI suggest it might be useful to explore the characteristics of the younger members of the cohort to compare their 'employability' to other jobless young adults.

2.7 Conclusions

2.7.1 A simplified theoretical framework

This chapter has explored the literature on SREI in Britain, using the quartet of themes proposed by McVicar (2008) as an organising framework. All four aspects (labour market demand, the benefits system, health and employability) affect the prospects of those attributing their economic inactivity to sickness being re-engaged in the labour market. Moreover, they are likely to overlap and be strongly associated, with causal direction often two-way. For instance, poor health or disability is likely to damage an individual's employability; but low perceived self-perceived employability may also lower long-term health and wellbeing (Berthoud, 2003; Berntson and Marklund, 2007). In a number of instances this led to unintended outcomes, sometimes because of inherent contradictions in policy. For example, reducing the generosity of unemployment benefits simultaneously made IB benefits relatively more attractive (OECD, 2003; Webster, 2005) and failed to protect the health of the unemployed (Bambra and Eikemo, 2009) encouraging diversion onto IB. In short, the problem is multifaceted and complex and *"selective models focused on one or two factors are unlikely to give us an accurate or complete picture"* (McVicar, 2008:134). Omission of key variables, especially health or labour market demand, will make interpreting the reasons for this phenomenon difficult.

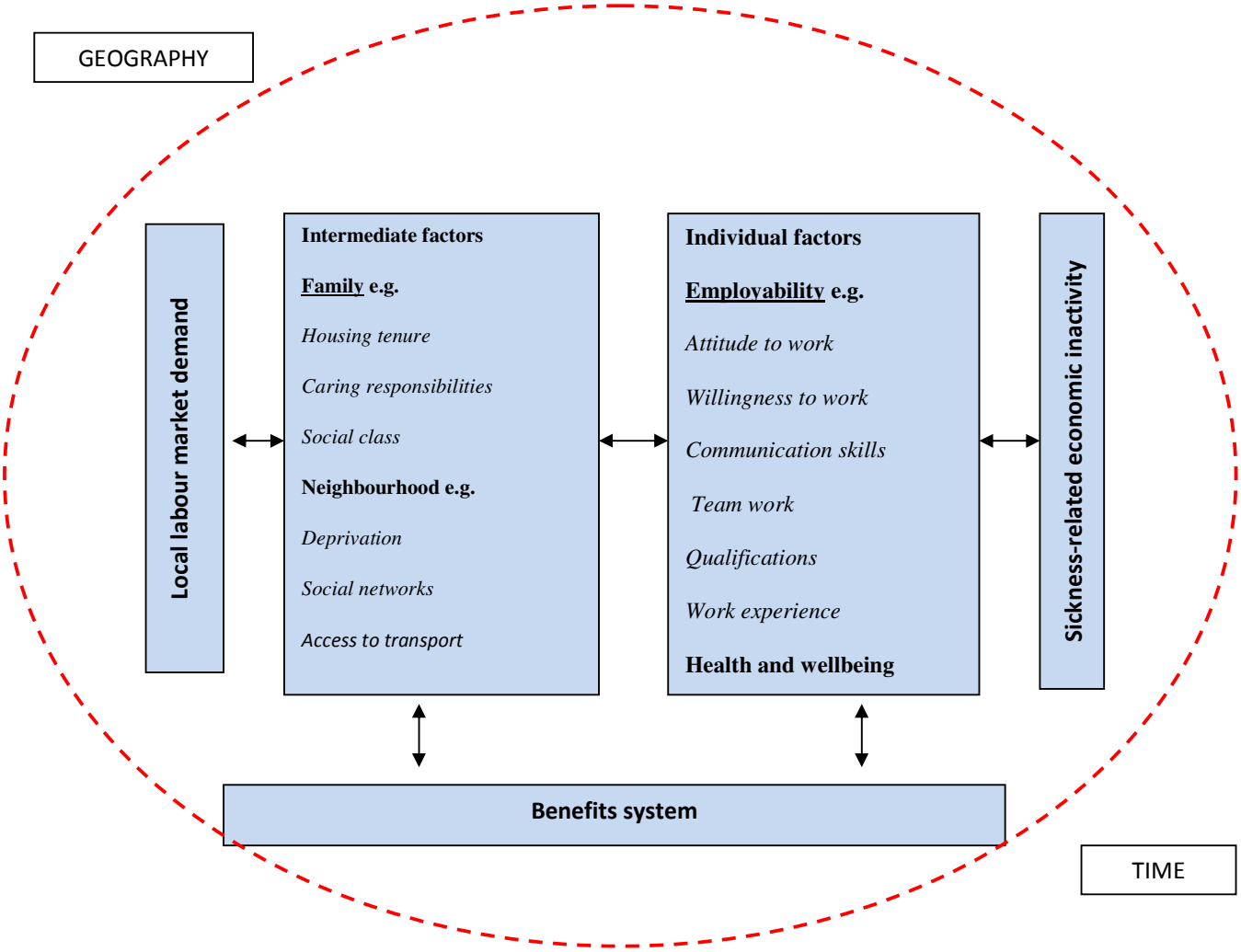
Existing theoretical models from the spheres of public health and labour market analysis can be adapted to provide a useful framework to locate the research within. The first useful model to consider is the one developed by Solar and Irwin (2005), synthesizing the main elements that contribute to inequalities in health. This begins with structural factors (including labour market structure, public policy and cultural and societal values) which flow into (and are in part defined by) social hierarchy. (A potential weakness, however, is the absence of consideration of spatial differences in health). Social hierarchy patterns the distribution of resources, often by social class, gender or ethnicity, so that different groups in society have varying access to education, income and occupations. Where these social factors interact with intermediary factors (such as material circumstances, behaviours and psychosocial factors, alongside the health care system), they distribute health and well-being throughout particular populations.

A second way of considering these issues is provided by Gordon (2003). His model looks at the potential for problems of labour demand to transmute over time into problems of labour market supply. This covers not just the quantity (or overall level) of labour market demand but also its qualitative features, for example the division of work by occupation or industrial sector, part-time or full-time employment, pay and conditions etc. and perhaps more subtly the balance between intellectual, physical and emotional capital that jobs require. At the centre of his conception is local unemployment, but over time this can lead to community-level (e.g. erosion of skills and work culture, poorer local information networks), household level (e.g. family fragmentation), and individual-level (e.g. educational underachievement, shorter employment spells deterioration in health) employment barriers that must be tackled as well as demand deficiencies. The Gordon model stresses that many of the casual links that reproduce unemployment are likely to be two way, so that social and economic problems can feed off each other in a vicious circle. It is also important to note that the original problem, weak demand, may also persist alongside its supply-side consequences.

Elements of both models can be used to build a basic potential explanatory framework (*Figure 2.1*). The framework is situated within two important additional features: *time* and

geography. Their inclusion is an explicit recognition that the relative importance of explanatory factors is likely to vary between local labour markets and between different time periods, as well as for particular individuals. The main structural factors (*labour market demand* and the *benefits regime*) underpin both *intermediate* context and *individual context*. At an *individual* level, a number of employability issues might be considered. Borrowing from McQuaid and Lindsay (2005), it is argued these might include willingness to work and positive attitudes towards work; labour market attachment (reflected in length of time on benefits and current economic status); soft skills such as communication and team work; qualifications and work experience; and health and wellbeing. In line with the original models, many of the casual links between the elements of this framework are interconnected and two-way.

Figure 2.1: A simplified framework for understanding sickness-related economic inactivity



Sources: Adapted from Solar and Inwin (2005), Gordon (2003) and McQuaid and Linsay (2005)

This thesis cannot address all the elements of the framework – it does not examine neighbourhood effects, for example – but will attempt to explore the influence of most of the other factors on sickness-related economic inactivity in Britain, through novel analysis of secondary data, covering more than two-decades in time and with a firm focus on describing and explaining the issues a sub-regional level.

2.7.2 Discussion

A major conclusion from the literature is the scale of the challenge involved in re-engaging those affected by sickness-related economic inactivity (SREI). Disproportionately concentrated in older industrial parts of Britain, fewer local jobs made it harder for this group to compete for opportunities locally – even before the current recession began (Industrial Communities Alliance, 2009). While 'aspirational' measures suggest that as many as 60% of the SREI might re-enter the labour force, more 'realistic' measures (including only those with a current desire to work or connection to the labour market) reduce this to fewer than one in four. Low levels of individual employability may be driven by real and perceived deficits in 'soft' skills and recent work experience, a lack of formal qualifications and, for some, a lack of basic literacy and numeracy. There is little evidence of either widespread fraud or abuse in the benefits system and little to indicate that dividing Incapacity Benefits claimants into 'deserving' and 'undeserving' sick will be a straightforward task. Evidence of negative cultures fostered by the benefits system at a neighbourhood or family level is, at best, mixed.

These issues are reinforced by real and often substantial health problems. Implicit in the discussion is the tension between two models of disability: the medical model and the social model. In the medical model, individuals and their particular health limitations (impairments) are placed at the core of the 'problem'. They need to be cured or treated, so that they can become part of mainstream society. In the social model, by contrast, it is the way society is organised – to discriminate directly and indirectly against those with health problems – which is the most pressing concern. Removing these socially constructed barriers is the key to enabling the disabled to participate fully in society (Crow, 1996). Elements of both models are present in the debates on SREI. The literature illustrates both the challenge and potential for individual interventions to improve health and employability, and the broader social context in which SREI exists. Resolving these tensions is beyond the scope of this thesis, though the balance between the medical and social models is a theme it will return to later on.

There is some evidence that the characteristics of the SREI in Britain have grown more gender-balanced and younger over time. An obvious question is whether the factors determining geographic variation in these 'new' cohorts are different from the stereotypical Incapacity Benefit claimant (McCormick, 2000). An important gap in knowledge has been filled by a recently completed, major ESRC project describing the increase in working-age women claiming Incapacity Benefits[6], but there remains scope to examine the increase in SREI among young adults. More generally, it would be useful for the debate to examine whether the variables associated with the prevalence of SREI changed at a local level over time.

A final conclusion from the literature is the importance of geography. Although this is most obviously linked to differences in labour market opportunity and health inequalities, it is also associated with variation in employability. The link is less obvious for the benefits system, though there may be scope to explore differences in the 'replacement ratio' created by the interaction between local wages and national benefit levels. Many studies have, understandably, focused on those areas most affected by sickness-related economic inactivity: former shipbuilding communities like Barrow-in-Furness or Inverclyde, coalmining areas like Merthyl Tydfil or industrial cities, like Glasgow or Manchester. A useful starting point for a new analysis would be to describe variation and time trends in working-age SREI in local British labour markets over time, alongside the economic and social change that occurred in these areas. Completeness might also suggest there would be value in comparing and contrasting with those local labour markets with a less industrial heritage, which prospered when the older industrial areas were still negotiating a difficult economic adjustment. The methods involved in this complex task will be discussed in the next chapter.

[6] See *Gender and Geography: Understanding the Rising Number of Women Claiming Incapacity Benefits in the UK*: http://www.geographyandgender.org/

Chapter 3 Methodology

3.1 Introduction

This thesis describes trends in sickness-related economic inactivity (SREI) in Britain over time at a local and national level and among young adults, and provides analysis of factors that can account for this change. SREI is investigated at different geographical levels (Britain, economic cluster and county) and among population sub-groups (working-age men and women, and young adults). This chapter describes the methods used to achieve this. First, it will justify the use of quantitative methods and secondary data to understand SREI and discuss the challenges in adopting this approach. Second, it will outline how the research questions and propositions are to be tested, provide more technical detail on individual methods and briefly discuss specific and cross-cutting methodological challenges involved. The remainder of the chapter discusses British counties as a basic 'building block' for describing the phenomenon of SREI through time, before concluding with a brief review of the strengths and limitations of the main secondary data sources used.

3.2 Research questions, methods and strategy

This section begins with a reminder of the main research questions that this thesis aims to answer, covering both a description of SREI and an explanation of what factors can plausibly account for its growth over time and distribution by geography and population sub-group. Next it debates the advantages and disadvantages of different research methods and justifies the selection of quantitative over qualitative methods. The final section discusses the use of triangulation as a research strategy to improve completeness and validation by employing multiple perspectives on the issue.

3.2.1 Key research questions

The five key research questions to be answered are as follows:

1. *How did the scale and demographic of working age and young adult SREI change in the last 30 years in Britain?*
2. *Were different trends in working age and young adult SREI observed for the counties and economic clusters of Britain over this period?*
3. *What are the most plausible reasons for the current distribution of working age and young adult SREI across the counties and economic clusters of Britain?*
4. *What are the most plausible reasons for the growth of working age and young adult SREI over time?*
5. *Did these reasons change over time?*

The sections that follow outline the choice of methods, research strategy and approaches used to examine each of these questions.

3.2.2 Choice of quantitative methods

Before outlining the overall research strategy, it would be appropriate to discuss the pros and cons of the two main schools of research methods, quantitative and qualitative methods, and why the former was selected in preference for this thesis. In broad terms, quantitative research tries to understand the world through quantities rather than words; is deductive in nature (i.e. subjects hypotheses to empirical tests to try and falsify them); and views social reality as something objective and external. By contrast, qualitative research tries to understand the world through words rather than quantities; is inductive by nature (i.e. tries to generate new theories); and see social reality as something that is subjective and internal (Bryman, 2004: 19-20). Both approaches have their own strengths and limitations.

Advantages of quantitative research include its focus on measurement; causality; generalisation; and replication (Bryman, 2004: 76-78). It is the first three of these aspects that give it appeal as a means of addressing the research questions posed in this thesis. If a concept can be measured, then we can look in fine-grain detail between units of observation: one aim of this research is to describe the variation between places (counties and economic clusters of Britain) and between sub-groups of the population (young adults and older working-age adults). Measurement also allows us to retain a degree of consistency in concepts, which is useful given we are interested in tracking change over time and between places. The ability to generalise is crucial, since we want to be able to apply findings beyond our samples to a larger population, both at a spatial level and towards a sub-group of the population (e.g. to describe trends in SREI in the Conurbations and among young British adults). Furthermore, measurement also provides a basis for more precise estimates of the association between key concepts to be made. For example, how much of the differences observed in SREI can be explained by concepts such as labour market demand or inequalities in health? Causality is also extremely relevant, given we want to explore the extent to which changes in some factors cause change in others (SREI). Here the example would be in using regression techniques to identify the most important factors associated with the distribution of SREI between places, and the growth in working-age SREI and young adult SREI over time.

Critics of quantitative research argue that such methods may be appropriate for the natural sciences, but not for social sciences, principally because of their reductionist character. By ignoring factors which cannot easily be reduced to numbers or data, they may obscure broader truths about society. Moreover, human beings, the subjects being observed in the social sciences, interpret the world and seek meaning from it; the subjects of natural sciences (e.g. gases) do not. To truly understand the social world we have to do more than observe people's behaviours; we have to understand the subjective meaning of that behaviour for the individuals concerned, which motivated it. In turn this involves gaining an insight into: *"the sum total of objects and occurrences within the social cultural world as experienced by the commonsense thinking of men [sic] living their daily lives... as a world common to all of us, either actually given or potentially accessible to everyone; and this involves intercommunication and language"* (Shutz, 1962: 53).

A further objection is that the process of measurement favoured by quantitative methods might encourage a spurious sense of accuracy. This might occur because of inadequate knowledge about which measurement system for capturing particular concepts are most appropriate, leading to researchers imposing their favoured measures and neglecting others: what Cicourel (1964) called 'measurement by fiat'. Nor is it clear that adopting common tools and instruments can overcome this problem, since people may not necessarily respond in a uniform way. Presumptions about relationships can lead to researchers misleading themselves and others (Cicourel, 1964: 14). For example, self-reported health measures are extensively used as proxies for morbidity and mortality – but the strength of this association may vary between cultures (O'Reilly et al, 2005). The use of instruments and procedures may obscure rather than reveal reality.

Advocates for qualitative research would argue that it overcomes the limitations of quantitative methods in four ways. First, it provides an opportunity to 'see through the eyes' of those being studied (Bryman, 2004: 279). This allows for the generation of much richer, detailed information than can help flesh out other data, and can help the researcher gain access to situations that would otherwise be closed to them through time, place or situation (Burgess, 2000: 100-122). Second, its interest in complex, subjective context can help provide insights missing from quantitative data. An example might be looking at the degree of stigma associated with unemployment relative to permanent sickness. Third, qualitative work may be better at providing insights into process and change (Bryman, 2004: 281). The final advantage offered by qualitative research is the degree of flexibility and adaptability in the research process. If new, perhaps more relevant paths of inquiry emerge during a first round of semi-structured interviews, observations or focus groups, then the researcher is free to pursue these (Bryman, 2004: 282-83). This is much more difficult to achieve with quantitative research, especially when relying on secondary datasets. An obvious example is the lack of Census data prior to 2001 on those with no or low-level qualifications, which would be much more relevant in testing 'employability' among the SREI through time.

However, despite the richness of the data, qualitative research presents a number of difficulties that would suggest it might be less useful for our task. The main drawback with qualitative research – and the primary reason for rejecting it – is in the difficulty with generalising beyond the immediate sample. Resource constraints would suggest interviewing being confined to a relatively small number of participants and a limited number of geographical locations. The small numbers involved mean that it would be more difficult to make inferences about the general population (Merton, 1999: 131), even in one part of the country. This is less useful where the aim is to provide a contrast between SREI in older industrial parts of Britain and other areas with stronger labour markets. It is also unlikely that the SREI issues of young adults in West Central Scotland would be identical to young adults in the rest of Britain, given the unusual patterns of mortality among young adults from violence, drugs and suicide in this part of the country (Walsh et al, 2008). Qualitative research may also provide useful insights into why (some) individuals in that place became detached from the labour market but provide less firm answers on the role of structural change (e.g. changes in industrial structure, growth in female employment, trends in health).

Pursuing a qualitative research strategy also poses some subsidiary concerns. It is often seen as much more subjective and less value-free than quantitative research, though this problem should not be overstated since all research is influenced in some way by the biases of the researcher. Qualitative research is also difficult to replicate, since the methods may be more closely influenced by the personal characteristics (age, gender, class, ethnicity) of the researcher than quantitative research. There are also a range of practical problems that qualitative research presents. First, accessing these closed spaces (especially across time) is dependent on the limitations of human memory. Although some of this can be mitigated by asking participants to 'take their time' and 'try hard to remember' (Foddy, 1993:100), it may be challenging to use this approach to investigate retrospective changes in SREI – a process compounded by individuals' need to impose meaning on past events and a desire to over-report favourable and under-report less desirable events. Third, some methods (such as focus groups) are less appropriate for gathering data on sensitive topics: other methods (semi-structured interviews) may be more valuable here. Fourth, special care has to be taken to ensure that qualitative research does not expose vulnerable participants to distress or political

or economic harm (Foddy, 1993). This seemed especially relevant: many Incapacity Benefits claimants suffer from mental health problems, and some may be concerned about being exposed to the risk of official sanctions.

Mixing qualitative and quantitative methods undoubtedly has value in exploring sickness-related economic inactivity, as demonstrated elsewhere (see Alcott et al, 2003, McGregor et al, 2003 and Buck et al, 2006 for examples). In the early stages of this thesis, the author considered conducting unstructured interviews with Incapacity Benefit claimants in the South West of Glasgow, alongside labour market analysis of the city and region. However, this would risk duplicating (less effectively) existing research carried out by McGregor et al (2003) and limit the scope of the thesis. The ability to measure, generalise and explore causality across the whole of mainland Britain, and the focus on testing hypotheses made quantitative methods more relevant to this thesis. The practical drawbacks of qualitative research made it less so. In the sections that follow, we discuss the use of secondary data, how key concepts were measured and the use of data triangulation as a research strategy.

3.2.3 Why use secondary data?

This thesis relies on secondary research (analysis of data which has been collected by others) rather than primary research (analysis of data collected by the student). Secondary analysis has a number of disadvantages: it requires an investment in time to become familiar with the concepts and variables available in each dataset and attention to detail given the often complex nature of some resources. Since the data may have been originally collected for a purpose quite distinct from the researcher's (e.g. for administration), it may lack variables that might have been useful in addressing the research questions. In some cases, the lack of control over the quality of the data (given it has been collected by someone else) may be an issue (Bryman, 2004: 205-6).

However, secondary analysis also brings with a number of advantages. Since the data used for analysis has already been collected, it reduces the costs and time to the researcher; this

also frees up time to interrogate the datasets or to cover a range of datasets. Despite the concerns raised earlier, most (if not all) of the secondary data available is of a much higher quality than a PhD student could expect to collect on his or her own: the sampling processes is often very rigorous, many of the large surveys cover the whole of Britain or the UK, and the original process of collection has often been managed by far more experienced researchers. Large samples mean that inferences can be made from this data to population sub-groups. Secondary datasets can also offer a route to analysis change over time, whether through cross-sections or via panel studies (Bryman: 201-5). Three of these advantages – comprehensive geographic coverage, the ability to compare sub-groups with confidence and looking at change through time – are very relevant to this thesis. For example, the Census allows us to estimate levels and rates of SREI at a county-level before the mid-1990s; the Benefit Leavers Survey permits sub-regional comparisons of destinations of IB leavers; and the use of administrative data on earnings and benefits allows us to track the generosity of Incapacity Benefits over a long period of time.

3.2.4 Issues in quantitative research

3.2.4.1 Sampling error, bias and definitions

As noted above, one of the main potential advantages of quantitative over qualitative methods, and a principal reason for choosing this method, is its ability to make inferences from samples to whole populations. Our ability to do this is limited by sampling error (a function of sample size) and by sample biases arising from the sample selection process and uneven response rates, as well as measurement errors that occur because of the conduct of interviewers or the recording of administrative data. A separate issue with secondary analysis is in shifting definitions, over time within the same source (e.g. the way in which unemployment is defined in the Census) or between sources (e.g. the way in which SREI is defined by benefits or survey measures).

With some sources (such as the Census and the most recent benefits data) the sampling proportion is so large – 100% (or approaching 100%) coverage of the population – the

sampling error will be close to zero and can effectively be ignored. Problems of sample bias, measurement error and definitions are more important. In Chapters 4-7, we use these properties to infer from samples to the general population e.g. to describe the percentage of working-age adults who were permanently sick and disabled in 2001. The problem of representativeness is less, though measurement error remains: this is addressed through maintaining consistent Census definitions as described in section 3.7.1.

Where samples are smaller, sampling errors are a greater constraint on inference but other concerns also remain. This is a lesser problem with sources such as the Labour Force Survey which has a large sample size and is designed to be representative at both the level of Government Offices for the Regions and the level of the Conurbations. Its 'boosted' version, the Annual Population Survey, is also designed to be representative down to local authority level. It is also less problematic when national-level inferences are made from the British Cohort Study 1970. In addition, the *Adult Psychiatric Morbidity Survey* (APMS) 2000 was designed to be representative at a national, NHS Regional Office and Regional Health Authority level. This leaves two surveys where inference at a sub-national level may be more challenging, the Benefits Leavers Survey and British Cohort Study 1970. To increase confidence in these estimates, some estimates were cross-checked with estimates from other sources. This cannot remove questions about bias or measurement error but can provide some reassurances.

The *Benefits Leavers Survey* was designed to be representative at a regional (Government Office Region) level, with weighting applied to correct for sample bias at this scale (Coleman and Kennedy, 2005). This might leave question marks about whether it yields representative results for the alternative geographies used in this thesis. Several approaches were used to check this. First, when recoding the data using local authority codes, county data re-aggregated to GOR boundaries was checked to ensure they matched the results in the original published report. Second, the geographic distribution of the BLS 04 sample by county/economic clusters was compared against the distribution of administrative data on IB leavers for the same geographies. Even after weighting was applied, Greater London and the Coalfields appear to be under-represented relative to administrative data, a limitation to bear

in mind when interpreting results. Third, the percentage of working-age adults leaving IB for another benefit was compared using the BLS04 data and DWP administrative data at an economic cluster and county level. The ranking of outcomes for economic clusters in the re-analysed survey was consistent with the administrative data. With one exception (Merseyside), the same was also broadly true when similar comparisons were for the seven conurbations. Merseyside had a very high rate of benefit leavers still claiming another DWP benefit (on a par with Strathclyde) when administrative data was used, but a much lower rate according to the BLS 04. This suggests the BLS04 sample may be unrepresentative of the Merseyside population and mean that findings about this county based on the Benefit Leavers Survey should be treated with great caution.

The *British Cohort Study* 1970 was also designed to be representative at a British and regional level. Its representativeness at a sub-regional level was checked in several ways:

- By comparing the distribution of the mid-year population estimates for 30-34 year olds against the distribution of the 1999/00 BCS70 sample, across the five economic clusters. This suggested that the BCS70 sample under-represented Prospering Britain and (especially) Greater London and over- represented the other clusters.

- By comparing the percentage of young adults (aged 16-24) claiming long-term IB/SDA measured by administrative data against the percentage of young adults claiming IB/SDA in the BCS70 sample, by economic cluster. Outcomes were similar across four of the five samples: the exception was Greater London, where the percentage of claimants measured by the survey was rather lower than that measured be the administrative data.

Overall, this suggests that some care should be taken when drawing conclusions based on differences across geography in the BCS70, especially those based on Greater London.

Confidence intervals and significance tests

Assuming that these surveys are not biased, statistical theory provides the means for dealing with pure sampling error. We can calculate confidence intervals (upper and lower limits) for a given proportion. In general, 95% confidence intervals were used, allowing us to be

confident 19 times out of 20 that the 'true' value lies between these upper and lower limits. For example, chapter Prospering Britain cluster, the percentage of Incapacity Benefit leavers moving into employment in 2004 was 59.4% (CI 56.9% - 61.9%). These confidence intervals can be used as a first step in determining whether outcomes are statistically different (e.g. whether IB leavers in the Conurbations are less likely to move into employment). When confidence intervals do not overlap, we can be certain 19 times out of 20 certain that the two sample are significantly different. With categorical data, an appropriate test for significance is the Chi-squared. This approach (confidence intervals and if necessary follow-up tests) was used when describing data from the Benefit Leavers Survey 2004, the Adult Psychiatric Morbidity Survey and the British Cohort Study 1970.

Dealing with attrition

A specific problem with sample bias arises in longitudinal surveys where subjects are repeatedly invited to participate. The gradual drop-out or attrition may mean that the retained sample becomes increasingly unrepresentative over time. One way of overcoming this would be to use auxiliary variables, excluded from the final model but highly correlated with those variables that are included, to estimate 'inverse probability weights'. These can be then be used to build a missing data model, which in turn can then be used to impute missing values and reduce the bias in the final model (Graham, 2009; Goldstein, 2009). This was not adopted here because it was beyond the scope of the thesis, though it could be adopted in future analysis.

Ecological fallacy

A final issue is that of ecological fallacy. An 'ecological fallacy' occurs when we assume that the associations that hold true at an aggregate level (including spatial units, such as county or economic cluster) also hold true at the level of the individual (Bhopal, 2002). For example, it may be that at an aggregate level, counties with higher levels of permanent sickness and disability are more likely to have weaker labour market, suggesting support for the hidden unemployment thesis. But at an *individual* level, the factors determining whether or not someone is permanently sick or disabled may be much more strongly related to factors other than the local labour market, such as social class, gender or age. However, as argued by Jargowsky (2005), the most reasonable way to reduce this problem is to ensure that

models designed to 'explain' associations are well-specified. Another approach is to work with individual-level data as well as an aggregate for spatial areas. This thesis will attempt to do this by using multivariate regression for the counties of Britain (see Ch. 4) and for young adults SREI (see Ch. 7) and by using a mix of both individual and area-level data.

3.2.4.2 Multiple determination, omitted variable bias and endogeneity

Once we move from describing patterns of data to explaining them, it is useful to look for associations between different variables: for example, between the rate of SREI among working-age men and the availability of employment opportunities across counties. Regression techniques provide a useful set of methods for doing this. The simplest form, where the association considered is between the dependent variable (SREI) and one independent variable, is known as simple regression. In Chapter 4 and 5, simple linear regression is used to begin to test some key hypotheses related to the research questions and propositions. A limitation with this approach is that the variable of interest (SREI) is likely to be influenced by many factors, not just one. This can lead to mistaken conclusions about the influence of single variables on SREI, by biasing the coefficients showing the strength and direction of association between variables, since we are not holding constant other factors. The risk of bias associated with excluding variables is usually argued to be more problematic than the inefficiency with including irrelevant variables in a model (Clarke, 2005: 5). To partially compensate for this problem, we extend simple linear regression to multivariate linear regression, where more than one explanatory variable is used to 'explain' variation in our dependent variable across the British counties (Ch. 4). Similarly, this thesis also makes use of multivariate logistic regression to attempt to explain the factors influencing the growth in young adult SREI using the categorical data available in the British Cohort Study 1970 (Ch. 7). However, as discussed by Clarke (2005), the inclusion of more and more variables may reduce bias but may equally increase it. The strategy adopted here heeds this warning, and follows the preferred strategy of *"test[ing] broad theories in narrow, focused, controlled circumstances...[to] provide a level of experimental control that control variables cannot*" (Clarke, 2005: 6, 17).

Related to this is the problem of unobserved heterogeneity. Some of the key factors that may be determining the distribution and growth in SREI may be unmeasured or unmeasurable. Omitting these variables can confound the results of any model though, and cause the coefficents (showing the relative contribution of each explanatory factor) to be biased (Sykes, 1992). This in turn is likely undermine the robustness of any conclusions drawn from the data. For example, we might conclude that our measures of labour market demand or skills are more important than factors such as the local culture, employer practices towards the recruitment of people with mental health problems. This is known as the problem of unobserved heterogeneity. In this thesis, this issue is partially addressed by using first difference models (Ch. 4 and Ch. 5), that is by regressing changes in the dependent variable on changes in the dependent variables between two time points (Liker et al, 1985). Taking first-differences allows us to remove unobserved time-invariant characteristics of the subjects being observed (Lindeboom et al, 2009), although it cannot adjust for the impact of characteristics that vary by time.

As discussed in the literature review (Chapter 2), a further potential issue is that some of the key variables used to explain SREI may themselves be determined by it; and also that some of those independent variables may be interdependent. This is known as the problem of endogeneity. Examples include labour market demand, skills and wages. The availability of a highly skilled workforce may foster a higher firm start-up rate, boosting demand and increasing wages (Ashcroft et al, 2007). Local labour markets with weaker demand tend to pay lower wages (Clayton and Brinkley, 2010), reducing the local pool of skilled labour as the better educated seek work elsewhere. This is relevant here because levels of SREI are likely to be affected by all these factors.

This can partly be addressed by using dummy variables and multiple regression. In an ideal world, a preferable approach would be to use a two-stage least squares model. This more complicated approach involved a number of steps:

- Regress the endogenous variable on those variables that are predetermined (e.g. jobs density on workforce skills, demographic change etc.)
- Using the equation generated by the final OLS fitted model to create a new variable, termed an 'instrumented variable' (Wonnacott and Wonnacott, 1990).

Such an approach is beyond the scope of this thesis. The research strategy (see next section) places greater emphasis on detailed analytical description of trends, comparisons across space and time and between data sources. In addition, doubts remain about the effectiveness of such statistical techniques. As argued by Bound et al. (1995), even the use of very large samples may not increase the precision of estimates where the correlation between instrumented variable and the dependent variable is small. Identification of effective instruments is also a persistent problem (Wonnacott and Wonnacott, 1990). With small samples, this problem increases.

3.2.5 Research strategy: completeness, validation and triangulation

The complex nature of the research problem leads to two major challenges for this thesis. First, there is the issue of theoretical *completeness*. As discussed in the literature review, there are a number of competing theories that might plausibly explain the varying distribution of SREI by place and population sub-group, and account for its growth over time. In the social sciences, research strategies that only probe only one particular theory at a time may lead to an incomplete picture of reality and inconclusive results (Palloni and Massey, 2001). In effect, it would be like trying to guess the picture shown by a jigsaw puzzle with only a handful of pieces. At the same time, the significance of a single explanatory factor can be tested by its ability to explain change over time, or to explain patterns at different spatial scales or for different groups. A better theory is one which gives a more complete explanation of observed differences. Such completeness also limits (but does not remove) the potential to argue that the relationship is spurious or caused by another factor. This is addressed through the testing of detailed propositions derived for each theory (see 3.3). The second challenge is that of *validation*. Findings might be less credible if they are based on analysis of a single dataset. The case for (or against) a particular hypothesis might be strengthened if different data sources used to explore the same topic provide convergent findings (Erzberger and Prein, 1997). Replication and consistency lends credibility. This

thesis will use triangulation to address these problems: theoretical triangulation to address the completeness problem and data triangulation to address the validation problem. Hence even the sections of the thesis dealing with bivariate relationships alone (Ch. 4-7) play an important part in validating or testing competing theories.

The term triangulation originated in navigation and surveying, where it refers to taking measurements from three separate places to pinpoint a particular location (Downward and Mearman, 2007). Theoretical triangulation, as applied here, involves placing multiple hypotheses side by side and collecting data to test the plausibility of each. It also involves generating and testing hypotheses for change over time, variation over space and differences between groups. Multiple perspectives mean that more pieces of the jigsaw puzzle are available to us: *"what can be seen as a wall from one perspective will maybe turn out to be a cube if images taken from at least two perspectives are combined"* (Erzberger and Prein, 1997: 146). This type of triangulation is also useful where the overall theory is incoherent, as an organising strategy (Denzin, 1970). Theoretical triangulation was also used to organise a review of stylised facts on sickness-related economic inactivity (see Chapter 4) and when discussing the growth of sickness-related economic inactivity among young adults in Britain (Ch. 6-7). This allowed a systematic way of exploring SREI among young adults, a sub-group which has received limited attention in the literature to date.

Data triangulation, also employed here, draws on many diverse data sources to explore the research question. A key advantage of data triangulation is that it allows the problem to be studied in more depth, looking across different units of analysis, notably time, space and individual: *"these units – time, space and person – are interrelated. A study of one demands a study of the others"* (Denzin, 1970: 302). This makes it highly attractive as an approach given the aims and objectives of this thesis. For instance, the *individual* characteristics of sickness-related economic inactivity can be studied using large-scale routine as well as bespoke surveys (e.g. the Labour Force Survey versus the Psychiatric Morbidity Survey of Adults in Private Households). *Spatial* variation in the concentration and potential causes of sickness-related economic inactivity might be analysed using the Census, administrative

health data and special surveys (e.g. Employers Skills Survey). And change through *time* at a national and local level can be examined using benefits and Census data.

Triangulation does not provide the whole picture: it is neither comprehensive nor wholly integrated. Alternative approaches might be to focus on just one or two datasets and use multivariate analysis to explore the relative importance of factors affecting the growth or geographic distribution in SREI. Although multivariate approaches may offer important advantages as discussed above, this potential is limited by the variables available in these secondary datasets. It proved impossible to examine spatial and temporal differences in SREI in relation to labour market demand, health inequalities, the welfare system and labour supply characteristics simultaneously. The most obvious examples are the use of the Census in Chapter 5, where labour market accounts are constructed, and Chapter 7, where logistic regression is applied to a single dataset (the British Cohort Study 1970). Based on expert advice and building on my emerging knowledge of labour market accounts, health surveys and administrative data, it was decided instead to rely more heavily on triangulation strategy. By drawing on extensive range of datasets and by examining the completeness of each theory, this approach aimed to test alternative propositions about changes to SREI (across places and across groups) in a systematic way. As a complement to that strategy, the thesis also used more sophisticated multivariate modelling in places.

3.3 Key propositions and methodological challenges

As noted in the introduction to this thesis, the main research question is:

How did working–age and young adult sickness-related economic inactivity change in the British counties over the last 30 years and why did this occur?

To answer this question, this thesis will address five key sub-questions and a number of key propositions by using quantitative data from a wide range of data sources. How these questions and propositions are to be tested and the key limitations and assumptions involved are outlined in the sections that follow.

3.3.1 Key propositions

Labour Market Demand

As discussed in Chapter 2, the official view is that a lack of labour market demand cannot adequately explain the growth and distribution of SREI in Britain (Kirkup, 2011; DWP, 2006). This is in contrast to a number of academic writers (e.g. Beatty et al, 2010), who argue that SREI has risen partly as a response to shifts in labour market demand and ongoing jobs deficits concentrated in particular parts of the country. In order to weigh the evidence more effectively on this issue, this thesis tests a number of key propositions, described in more detail below. These propositions derive from the broad theory of labour demand, so they are examples of seeking to test theory through completeness.

Proposition 1: There is a contemporary, negative association between local labour market demand and SREI. In other words, places with recent weaker demand tend to have higher concentrations of SREI. This is tested in two ways:

i) *Cross-sectional analysis of the relationship between SREI and jobs density ratios at county level, April 2001.* If there is a negative association this supports the demand-side thesis though only weakly. However, an alternative explanation might focus on the fact that jobs densities in self-contained labour markets are closely related to the number of people in employment, making this a circular argument. The 'demand' measure might actually reflect health problems or other labour supply problems. Measures of unmet demand are also required, leading to:

ii) *Cross-sectional analysis of the relationship between SREI and U:V ratios across labour markets, 2005-2006.* The U:V (or Beveridge) ratio is the number of people claiming Job Seeker's Allowance divided by the number of unfilled vacancies (see section 3.4.2 for a detailed discussion). For a given labour market, a higher U:V ratio implies weaker demand. If there is a positive association between SREI and the U:V ratio then this again supports the argument that weak demand for labour leads to higher SREI. As with the job density ratios, a challenge to this argument is that high U:V ratios simply reflect the lower employability of the labour force in certain geographic areas.

Proposition 2: The association between local labour market demand and SREI holds across different groups. The demand-side argument for the growth of SREI has, in the past, been derived from the experiences of older male manual workers: it may be that it applies to this group but not to others in the labour market. Here the theory is extended to consider the extent to which the same demand-side pressures might apply to men and women, and to younger and older working-age adults.

i) *Cross-sectional analysis of the relationship between SREI and jobs density ratios for men and women at county level, April 2001.* If there is a statistically significant, negative association for both men and women this provides further support for demand theories because trends in aggregate demand for men and women have been quite different. This does not address the limitations noted previously, however.

ii) *Cross-sectional analysis of the relationship between SREI among adults aged 25-64 and young adults aged 16-24 at county level, May 2006.* If there is a positive association between the geographical concentration of these groups this provides further support as, again, trends in demand are quite different. The same limitations described earlier, apply, however.

iii) *Analyses of trends in employment rates among young adults not in full-time education (NFTE) split by geography.* If employment rates among young adults NFTE vary by geography, this might allow us to reject the null hypothesis of a buoyant demand for youth non-student labour across space. It should be acknowledged, though, that any differences in employment rates across geography reflect lower levels of employability among young adults NFTE (e.g. lower levels of skill).

iv) *Analyses of trends in employment rates among young adults not in full-time education (NFTE) split by geography and highest level of qualification.* As a partial solution to the issue raised above, further analyses of the labour market for young adults NFTE was carried out for sub-groups. If employment rates for those with similar levels of qualifications (and thus 'employability') also vary by geography, this might give us greater confidence to reject the null hypothesis of a buoyant youth labour market.

Proposition 3: The association between local labour market demand and SREI was either not present or was weaker at earlier times. The argument as the literature is that growth in SREI occurred because this status increasingly functioned as a form of hidden unemployment. If it is correct we would expect to see any association between SREI and labour market demand strengthening over time.

i) *Repeat cross-sectional analysis of the relationship between SREI and jobs density ratios at county level, April 1981, April 1991 and 2001.* In this way, we can examine the strength of the association between these measures at three points in time. If the correlation grows stronger this supports the demand explanation but also reduces the potential some for competing explanations as they would need to account for the same pattern of change.

ii) *Multiple linear regression analysis of the association between SREI and key independent variables at county level, April 1981, April 1991 and 2001.* In this way, we can examine the relative importance of the demand and some other factors, and show the contribution of each holding other factors constant. In this case, if the measure of jobs density remains a significant variable, all things being equal, even after adding our measures of skills, health and benefits incentives, this makes it more plausible that the demand effect is real. We can also examine whether the relative importance of this variable changed through time, by examining the standardised coefficients (which adjust for the variables being measured in different units). An important limitation of this approach is the weakness of some of the measures of alternative factors, reflecting data constraints.

Proposition 4: The change in demand was related to change in SREI. This is a differencing approach whose general advantages were discussed above and is tested in the following ways:

i) *Differencing of the change in workplace employment and other components of labour market change across five economic clusters, for men and women separately.* This uses the well-established labour market accounts technique

to show how changes in labour demand might ultimately feed through into SREI.

ii) *Simple linear regression analysis of the association between change in industrial employment and change in SREI for selected counties.* Using the data generated by the labour market accounts data, we can examine the extent to which the change in SREI reflects a 'job destruction' effect i.e. job losses in industry were translated into transfers to Incapacity Benefits. A positive relationship suggests that losses in industry were not accommodated smoothly through other adjustment mechanisms (such as demographic change, sectoral change, early retirement etc.).

iii) *Simple linear regression analysis of the association between change in non-industrial employment and change in SREI for selected counties.* Using the data generated by the labour market accounts data, we can examine the extent to which the change in SREI reflects a 'weak growth' effect i.e. that growth in SREI was stronger where the capacity of local labour markets to generate alternative employment was weaker. A negative relationship supports the hypothesis that the demand–side had not fully recovered between 1981 and 2001, and SREI can be (largely) explained by demand-side factors.

The benefits system

A second group of explanations for the growth and geographic distribution of SREI coalesce around the benefits system: in particular (i) the perceived generosity of Incapacity Benefits and (ii) administrative rules which may create perverse incentives for people to move from more strictly policed benefits (such as Job Seeker's Allowance) to Incapacity Benefits. These issues will be relevant for the whole working-age population, but may be especially relevant when potential earnings are low (e.g. in low-demand or rural labour markets, for the young, unskilled and part-time workers). This thesis will contribute to knowledge on this issue by testing a number of propositions.

Proposition 5: Changes in SREI were associated with the generosity (in absolute or relative terms) of Incapacity Benefits. Here the argument is that changes in either the absolute value of Incapacity Benefits and/or changes in their value relative to local wages or unemployment benefits were closely aligned to in-flows to IB. This is examined as follows:

i) *Cross-sectional comparisons of trends in the national short-term (less than 6 months) Incapacity Benefit stock, used as a proxy for 'inflows', and the real value of Incapacity Benefits in 2006 prices, 1981-2006.* If these trends are closely aligned and/or changes in the value of IB are followed after a lag by changes in the size of the proxy for IB inflows, this supports the idea of an absolute benefit effect. Strength of correlation depends on how well the timing of absolute changes fit the timing of changes in the stock of short-term claims. If these are close, then this would provide strong evidence, provided no other change is going on, since it would be difficult to propose other factors that could explain the same pattern. However, even if no association is found between the absolute value of IB and short-term claims (inflows), the benefits system could still play a role if claimants view IB against what they could earn in local wages or receive in unemployment benefits. This leads to:

ii) *Comparisons of trends in the national short-term (less than 6 months) Incapacity Benefit stock, used as a proxy for 'inflows', and the 'replacement ratio' of IB, 1981-2006.* The concept of the replacement ratio is familiar in the economics literature, where it is used to describe the proportion of earnings replaced by welfare benefits (usually unemployment benefits). Here the concept is extended by comparing trends in the ratio of the real value of Incapacity Benefits relative to half average earnings after housing costs (see section 4.3.1 for more details). If these trends are closely aligned or changes in the replacement ratio are followed after a lag by changes in the proxy for IB inflows, this will again provide strong support for the proposition. Comparisons with earnings, though, may be less relevant for certain groups, such as the unemployed, low-skilled or part-time workers with health problems, who may judge the value of IB not relative to earnings but against unemployment benefits. This leads to:

iii) *Comparisons of trends in the national short-term (less than 6 months) Incapacity Benefit stock, used as a proxy for 'inflows', and the value of IB compared with unemployment benefits, 1981-2006.* Responding to the point above, this tests the view that changes in the value of IB relative to UB were closely related to changes in short-term Incapacity Benefits claims. If the two measures are closely aligned, this would provide strong evidence to support the proposition. However, even if no association is found, this does not exclude an alternative explanation of persistent (though unchanging) incentives to claim IB compared to unemployment benefits.

Proposition 6: Changes in SREI were associated with changes in the rules around claiming IB. This is examined as follows:

i) *Comparisons of trends in the long-term Incapacity Benefit stock and the percentage of examined claims, 1981-1994.* As noted in the literature, Autor and Duggan (2006) argue that the growth in the IB caseload in the U.S. was associated with a relaxation in the rules required to claim. A key question is whether similar processes were at work in Britain. Long-term caseloads are used here rather than the proxy for inflows because the 'testing' process occurs throughout the life of a claim. If the fall in the percentage of 'tested' IB claims preceded the rise in the long-term caseload, this would support the proposition. This approach is limited, though, by the fact it tells us little about the informal processes at work (e.g. claimants and GPs 'learning' how to use the system, officials through choice or work-pressure being unable to cope with the rise in caseloads).

Proposition 7: Employment opportunities for benefit leavers vary by geography. An implicit assumption driving official policy is that benefit leavers have the same prospect of finding employment after leaving benefits regardless of where they live. By testing this assumption, we can gain some insights into the context of how the benefit system functions at a local level and its contribution to the distribution of SREI. This is examined as follows:

i) *Cross-sectional comparisons of the destinations of working-age IB leavers by economic cluster and Conurbation.* This tests whether the likelihood of leaving IB for employment or other benefits varies significantly by geography. If there is a significant variation, this provides some support for the proposition. Whether the reasons then lie in differences in employability, local replacement ratios or local demand are addressed elsewhere. This approach could be criticised by excluding local 'cultures of worklesness' from consideration.

ii) *Cross-sectional comparisons of the destinations of young adult, long-term (six months+) Job Seeker's Allowance claimants, by economic cluster.* This tests whether the likelihood of young adult long-term JSA claimants leaving JSA for IB varies significantly by geography. If there is an association, this also supports the proposition, though the same limitations for working-age adults leaving IB, outlined above, also apply.

iii) *Cross-sectional analysis of the relationship between SREI and the ratio of national IB benefits to local wages (for men and women) at county level, April 2001.* If there is a statistically significant, positive association ($p<0.05$) this provides some support for the proposition, and hints at a role for local replacement ratios (i.e. that local wages are low relative to national benefits). The R Squared value provides some clues as to the strength of this association. A significant, positive association for women might allow us to rule out the view that local wages are less relevant in playing a role in SREI among women.

Proposition 8: Local incentives to claim IB relative to unemployment benefits were either not present or were weaker at earlier times. This proposition extends the work of Nickell and Faggio (2005) who identified local wages as being important in determining the extent of prime-age male economic inactivity, as follows:

i) *Repeat cross-sectional analysis of the relationship between SREI and the ratio of national IB benefits to local wages (for men and women) at county level, April 1981,*

April 1991 and 2001. In this way, we can examine the statistical significance of the association and correlation (R square) between these measures at three points in time. If the correlation grows stronger and/or the relationship becomes more significant, this provides some support for the argument that IB functioned more like an alternative to unemployment benefits in later decades.

Employability

The third group of explanations for the growth and geographic distribution of SREI concentrate on 'employability'. In the literature, employability encompasses a broad spectrum of factors that determine individuals' prospects of finding work, keeping a job and thriving in the labour market, covering individual attributes (e.g. attitudes, experience, soft and hard skills, housing tenure, health, caring responsibilities) and the local labour market context in which they operate. Official policy tends to interpret employability rather more narrowly, suggesting that the key is to tackle shortfalls in confidence (especially related to health problems) and basic soft skills. The approach in this thesis is to test this empirically.

Proposition 9: Individuals with a given level of employability should face the same employment prospects across different places.

i) *Cross-sectional comparisons of working-age employment rates of those with no qualifications by economic cluster and Conurbation.* If employment rates for working-age people without formal qualifications do not vary by local labour market, this suggests additional supplies of low-skilled labour could be absorbed easily into the labour market. The challenge is to persuade more of the low-skilled to re-engage. If they do vary, this suggests that factors other than skills may be at work. Whether demand or health can be considered as making a plausible contribution depends on the evidence from other sections of the thesis.

Proposition 10: Growth in SREI can be partly attributed to 'displacement' by more employable groups, such as migrants, women returners and commuters.

i) *Cross sectional comparisons of international migration and long-term Incapacity Benefit claimants, by county, 2005.* The basic argument here is that the persistence of SREI is a reflection of long-term IB claimants being 'out-competed' by international migrants (especially from A8 countries such as

Poland), who were more willing to actively pursue vacancies. This is tested by comparing association between the geographic concentration of IB claimants and National Insurance Number (NINo) registrations for 2005. If there is a positive association then this provides some support for the proposition.

ii) *Simple linear regression analysis of the association between change in female labour market participation and change in SREI for selected counties.* Using the data generated by the labour market accounts data, we can examine the extent to which the growth in SREI reflects competition from female returners. A significant positive relationship would suggest some displacement of other working-age people into SREI by the growth in female labour market participation and allow us to reject the null hypothesis of no association.

iii) *Simple linear regression analysis of the association between change in male commuting change in SREI for selected counties.* Using the data generated by the labour market accounts data, we can examine the extent to which the growth in SREI reflects competition from male commuters. A significant positive relationship would suggest some displacement of other working-age people into SREI by male commuters and allow us to reject the null hypothesis of no association.

Health

This thesis argues that our understanding of the growth in SREI can be enhanced by incorporating issues of geography, population sub-group and time. As noted in the literature review, this approach is also relevant when reviewing health-based explanations for the emergence of this problem. This section summarises relevant propositions, how they are to be tested, and the associated assumptions and limitations.

Proposition 11: The growth in SREI cannot be attributed to a general worsening in health, but persistent (and new) inequalities in health may have played a role. The argument here is that while global markers of health (e.g. life expectancy for all British adults) improved over

this period, health remained unequally distributed across the population, with certain groups and certain places continuing to experience markedly worse health, making them particularly vulnerable to displacement into sickness-related economic inactivity. This is tested in several ways:

i) *Description of trends in European-standardised mortality rates (EASRs) among working age adults by economic cluster, 1981-2001.* This analysis allows us to show how mortality rates have changed in absolute terms in each of the five areas over time. If the trend is downward in all five clusters, we can rule out a straightforward worsening in working-age health as causing rising SREI. If the relative difference in rates between places failed to narrow, this might provide some evidence to support the proposition that inequalities in health played a role in the rise of SREI.

ii) *Repeat cross-sectional analysis of the relationship between SREI and EASRs at county level, April 1981, April 1991 and 2001.* In this way, we can examine the association between these measures at three points in time. If the relationship remains significant throughout, we can reject the null hypothesis that spatial equalities in health were less relevant in explaining the distribution of SREI in 2001 than in 1981. Note that this is still consistent with the hidden unemployment thesis, which does not require any worsening in health.

Proposition 12: The mental health problems faced by IB claimants (especially the young) are overstated.

i) *Triangulation of survey-based measures of the mental health of IB claimants with administrative measures.* The prevalence of mental health problems among IB claimants in surveys (the Revised Clinical Interview Schedule, CIS-R) can be compared against the percentage defined by the administrative system as claiming for mental health reasons. If the measures produce significantly different result, this supports the idea that IB claims due to mental health problems may be being 'fabricated'. If they provide similar results, it is possible both are providing false positives but this is unlikely given the very different source for the data.

ii) *Comparison of mental health problems among young adults by benefit status.* The prevalence of mental health problems can also be compared among young adults by whether they claim IB, claim JSA or don't claim any benefits. Two main measures are used: the General Health Questionnaire (GHQ-12) and the Revised Clinical Interview Schedule (CIS-R). If rates of mental health problems are much higher for IB claimants, this again supports the idea that these are genuine claims.

Neither the CIS-R nor the GHQ-12 provides an *absolutely* objective measure of health: they are based on survey data. It might be expected that those claiming Incapacity benefits for a mental health problem would be likely to emphasise the nature of such problems through their survey responses. This is referred to in the literature as 'justification bias' (Jones, 2007). However, this is countered by evidence that self-reported health measures tend to understate the true extent of objective health problems among the working-age population (Jones, 2003).

Young people and SREI

The second half of this thesis investigates the growth and distribution SREI among young adults. In particular, we are interested in the extent to which the reasons for the emergence of this phenomenon differ from older working-age adults. This is explored by testing the following propositions.

Proposition 13: Poorer attitudes towards work and learning, along with substance misuse, are the main explanations for growth in young adult SREI, even after other factors are taken into account. This proposition emerges from the notion of the work ethic, family effects and neighbourhood effects, discussed in the literature review.

i) *Comparisons of attitudes towards work and learning by benefit status.* If attitudes towards work and learning do not vary between young adults by benefit status, this suggests young IB claimants do not have poorer attitudes. However, since results are are self-reported, their reliability might be questioned because respondents might prefer to give more socially desirable results.

ii) *Comparisons of reported drug use and problematic drug use by benefit status.* If reported drug use/problem drug use does not vary between young adults depending on benefit status, this provides support for the idea that substance misuse is not uniquely high among young IB claimants.

iii) *Multiple logistic regression analysis.* Here we are trying to estimate the 'strength' of key variables (attitudes and drug misuse) in contributing to the odds of a young adult claiming IB versus not claiming IB, once a number of other factors are included. As with the other propositions, this is to reduce the problem of multiple determination: that is, a single factor may appear significant in driving the independent variable in isolation, but may become insignificant once other factors are included in a model. This approach provides a stronger test of the relationships affecting young adult SREI. Limitations include might include whether variables omitted from the model might be more important in 'explaining' young adult SREI.

Unifying models

Testing for associations between independent and dependent variables singly might produce inconclusive or misleading results, since such tests fail to control for the influence of multiple factors. Therefore, this thesis also extends the analysis to include multivariate regression analysis.

i) *Multivariate cross-section analysis of the association between SREI and key independent variables at county level, April 1981, April 1991 and 2001.* In this way, we can examine the significance of the association between SREI and measures of health, skills, labour market demand and the interaction between wages/the benefits system at three points in time, controlling for these other factors. Limitations of this approach include data restrictions on the dimensions measured and the quality of measurement. There may also still be omitted variables from these models.

ii) *First-difference multivariate regression analysis of the change in SREI between 1981 and 2001 and the change in key independent variables at county level between 1981*

and 2001. In this way, we can examine the significance of the association between changes in SREI and measures of health, skills, labour market demand and the interaction between wages/the benefits system at two points in time, controlling for other factors. By 'differencing' (regressing the change in the independent variables on change in the dependent variable), we can remove the influence associated with unobserved time invariant characteristics, although the influence of time-varying factors remain.

iii) *Panel multivariate regression analysis of the association between SREI and key independent variables at county level.* By including all available observations for men (171 cases) and women (165 cases) we can increase the sample size and the level of confidence with which any findings can be extended beyond this sample. To adjust for the fact these are repeated measures (the same counties measured at three points through time), which might otherwise produce misleading results the MIXED procedure in SPSS is used. Interaction effects (looking at whether time and economic cluster of residence have an impact on the explanatory variables) are also tested for.

iv) *Multivariate logistic regression.* In Chapter 7, the range of variables that might 'explain' the likelihood of claiming IB for young adults (family, individual and structural) are tested together in a single logistic model. The approach also includes geographic variables, based on area of residence in 1986, and the results of additional analysis on interaction effects are reported on.

3.4 Detailed methods and measures

This section outlines the detailed methods used in this thesis. First, it discusses Labour Market Accounts as a technique for describing change over time in local labour markets, and how the method can be adapted to include change in SREI. Second, the origins and theory behind the U:V (or Beveridge) ratio, which measures unmet demand for labour by comparing vacancies and claimant unemployment, are outlined. Third, the assumptions behind, and process of, ordinary least squared (OLS) regression, which can be used to show the strength of association between continuous, measured variables are considered and some consideration given to ways in which it can contribute to improving knowledge of SREI.

Finally, the use of logistic regression and the odds ratio to assess associations between categorical data is detailed.

3.4.1 Labour market accounts

Labour market 'accounts' (LMAs) offer a unique insight into understanding labour market change. First used in the UK regional context by the Cambridge Economic Policy Group (1980), LMAs can be compiled in a number of ways, but effectively work by disaggregating labour market flows into their different components:

- *Natural increase in the workforce*: the excess in those reaching working-age minus deaths of those of working-age and people reaching state pension age
- *Net migration*: the balance between people of working-age moving into and moving out of an area
- *Change in net commuting*: the change in the balance of commuting flows into and out of an area
- *Change in labour force participation*: the change in the proportion of working-age adults who are economically active (i.e. working or looking for a job)
- *Change in total employment*
- *Change in recorded unemployment*

Since these components are arithmetically related, they can be summed together to see the overall pattern of labour market change. They have been used to analysis labour market change in coalfields and seaside towns, conurbations and cities, across Britain for the last thirty years (see for example, Owen, Gillespie and Coombes, 1984, Beatty, Fothergill and Powell, 2007). Labour Market Accounts (LMAs) offer the opportunity to expand the headline labour market adjustment described in Chapter 4, to include:

- Sectoral change, by showing the decline of industrial employment and the expansion of service sector employment;
- Changes in migration and commuting flows, alongside natural growth in the working-age population; and

- Analysis of other forms of economic inactivity (early retirement, education, caring responsibilities and 'other' unspecified), alongside our two previous measures of non-employment (unemployment and sickness-related economic inactivity).

All the elements except the migration data come from the decennial Census of Population. This allows demographic changes to be linked in a consistent way to measures of employment. Questions on workplace employment were first asked in the 1921 Census, then consistently for all Censuses between 1951 and 2001 (OPCS/GRO, 1977). Since the jobs data and demographic data come from the same source, and relate to individuals' main job only, changes in workplace employment can be linked to changes in economic status (unemployment, sickness-related economic inactivity and other economic activities) together with commuting and migration.

Using the Census as the source of small area jobs data also avoids other problems:

- **Discontinuity**: local area British *employee* jobs data was collected through the Census of Employment between 1971 and 1995, the Annual Employment Survey between 1995 and 1998 and the Annual Business Inquiry (ABI) from 1998 onwards. The surveys differed in the methodology used to collect the data and using them to estimate levels of local employment through time may be problematic.
- **'Double-jobbing'**: the ABI and its predecessors ask employers how many people they employ; the Census of Population asks about individuals' main job. In a general sense, the ratio of jobs to people may be overstated (since one person may hold more than one job).
- **Self-employment**: data on self-employment is not collected through the surveys shown above and has to be derived from the Labour Force Survey and added to local employee statistics.

For these reasons, the Census workplace employment figures remain the most useful for the purpose set here. Indeed, as the ONS themselves acknowledge *"the Census is extremely*

valuable as the only useful labour market data for comparing small geographical areas" (ONS paper, undated).

Migration data remains the most problematic component of the labour market accounts to estimate, as acknowledged elsewhere (Turok and Edge, 1999; Owen et al, 1984). The migration data used here is drawn from the NHSCR (National Health Service Register) data, and is based on the net flow (inflow minus outflow) of working-age people to/from the British counties between December 1981 and December 2000. Data was obtained for England and Wales only – and for 1999-2000, data for South Glamorgan, Lancashire and Cleveland was unavailable and estimates were used instead[7]. Here the time periods used cover the 20 calendar years 1981 to 2000 inclusive. For Scottish regions, the migration and natural change data was combined into a single component of demographic change, shown in the 'natural change' row, an approach which has precedent elsewhere (Turok and Edge, 1999). Limitations of the migration data include:

- 'Working-age' refers to males aged 15-64 and females aged 15-59. Including 15-year olds will tend to slightly inflate changes in 'working-age' internal migration compared with the 16-59/64 year old definition used for other components of the LMAs.
- It is dependent on people pre-registering with GPs. Certain groups (prisoners, the armed forces) are deliberately excluded from GP list practices; while others (notably young men and marginalised groups e.g. the homeless) are less likely to register with GPs. The timing of registration may also be an issue: Millet et al (2005) found that many people delay registration with a GP after moving residence, for a variety of reasons. This too may reduce the reliability of migration data.

Shortcomings notwithstanding, labour market accounts (LMA) nonetheless offer a useful tool for assessing shifts in local labour markets over time.

[7] By rolling forward the average migration for the period among working-age men and women 1991-1998.

The major challenges are with assumptions about the accuracy of migration and commuting data. As highlighted in the section on the construction of labour market accounts, the migration component is drawn not from the Census of Population, but from an administrative source, NHS registration data. This is likely to constrain the accuracy of migration estimates in two ways:

- Certain groups, especially young adults, students, the armed forces and those from vulnerable groups (e.g. the homeless) are less likely to register/deregister with a GP when changing their address. Often these groups are likely to be a more mobile population. This may *understate* the contribution of migration to population change.

- On the other hand, working-age statistics include 15-year olds. This is likely to *overstate* the contribution of migration to population change.

The ONS endeavours to adjust for some of the inaccuracies in the GP practice data, through data cleaning and checking procedures[8], though some uncertainty will remain. The inclusion of 15-year olds could be adjusted for by assuming that the percentage of migrants aged 15 in the 15-24 age group was the same as the percentage of people age 15 in the 15-24 age group in the 1991 or 2001 Census. However, it was felt that this would simply introduce another layer of uncertainty into the accounts, so estimates were left as recorded in the NHS data.

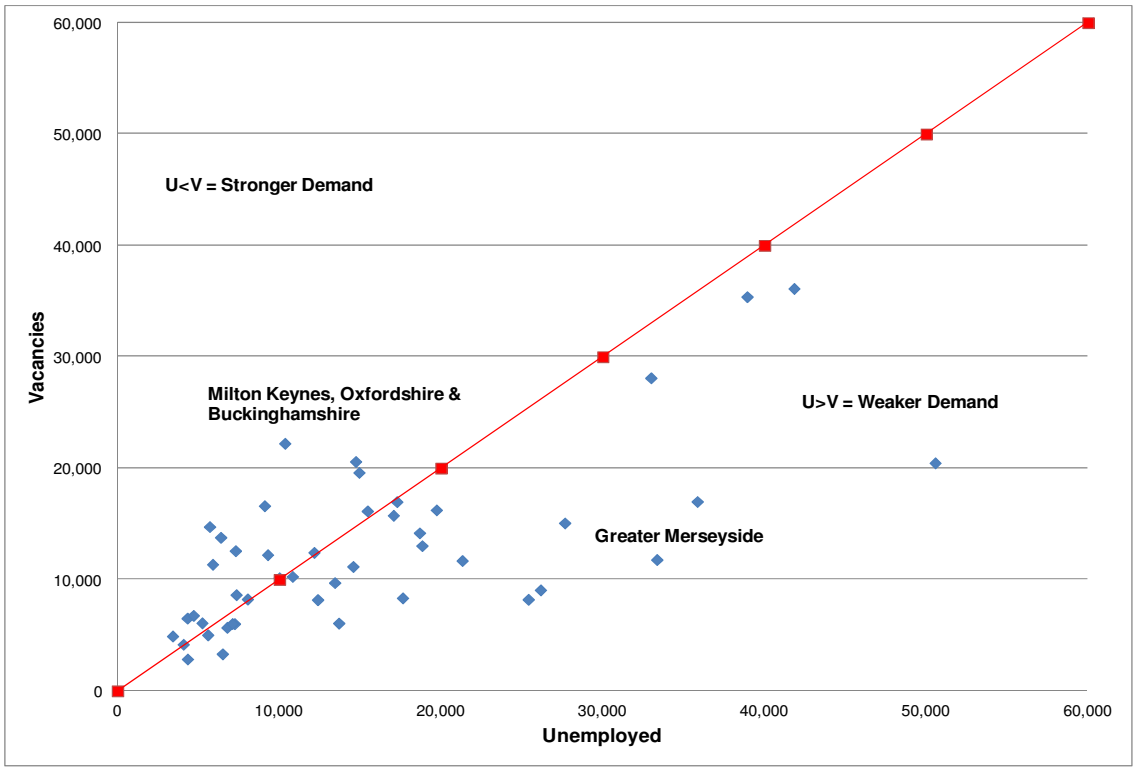
For commuting data, estimates were calculated as the residual once all the other components of the labour market accounts were assembled. The challenge here is to assume that the other elements are themselves accurate (including, as discussed above, the migration components). Again though, it is difficult to compare components against alternative sub-regional data when the Census itself is the main source of such data.

[8] http://www.neighbourhood.statistics.gov.uk/HTMLDocs/images/Population-Turnover-Rates-Methodology.pdf

3.4.2 The U:V ratio

In Chapter 4, the U:V (or Beveridge) ratio is used to examine the degree of imbalance between supply and demand in local labour markets. The negative association between unemployment (U) and vacancies (V) was first noted by Beveridge (1944). In the 1950s, this idea was further developed by Dow and Dicks-Mireaux (1958), who proposed using this U:V ratio to measure how close the labour market was to full employment (Rodenburg, 2007). The concept is illustrated in Figure 3.1, comparing vacancies from the National Employers Skills Survey with claimant count unemployment for every English Learning and Skills Council in 2005. The line represents equality between unemployment and vacancies (U=V). Points to the right of the line (U>V) imply a ratio of of greater than one: an excess of unemployed over vacancies, and therefore demand-deficient unemployment. Points to the left of the line (U<V) imply a ratio of less than one, an excess of vacancies over unemployed and a relatively tight labour market (MacKay, 1999). For example, places like Greater Merseyside and County Durham lie below the line, implying 'slacker' labour markets, while Milton Keynes, Oxfordshire and Buckinghamshire and Cambridgeshire lie above the line, indicating stronger demand for labour.

Figure 3.1: The U:V ratio and labour market demand in local labour markets



There are several problems with implementing the UV ratio in practice, especially at a local level. The true stock of vacancies is often unknown. Administrative data on vacancies has traditionally been less complete than unemployment data, since employers have no obligation to report any available vacancies and many prefer to use alternative routes for recruitment. Simple U:V ratios also ignore any problems of skills mismatch, so that even U=V, demand and supply for particular occupations and industries could be unbalanced. The flaws with the claimant count as a measure of unemployment have also been covered extensively elsewhere (Webster, 2002). Any of these issues could potentially bias U or V, making the U:V ratio a misleading indicator of labour market demand.

Despite these shortcomings, the U:V (or Beveridge) ratio has been used by several writers to examine imbalances in labour market supply and demand between local labour markets (Arntz, 2005; Webster, 2000; MacKay, 1999). In Chapter 4, the completeness issues is addressed by using more recent survey-based measures of vacancies, which capture more of the stock of vacancies not notified through official channels and present a more accurate picture of the total number of vacancies available locally. Where administrative data has

been used, the U:V ratio was disaggregated by occupation type to address questions of skills mismatch.

3.4.3 Ordinary least squared (OLS) regression

This thesis also uses a basic statistical technique, ordinary least squared (OLS) regression, to help answer the key research questions and test key propositions about SREI in Britain. The simplest regression technique, bivariate analysis, estimates a best fit line showing how a variable we want to explain (dependent variable, Y) is related to another (an independent variable, X) using the ordinary least squared (OLS) method. The method produces an equation which describes the relationship in terms of two parameters: the intercept (constant, α) and the slope of the line (Beta), with the latter showing the change in Y that accompanies a unit change in the independent variable X (Wonnacott and Wonnacott, 1990: 357-368). There would also be a residual error term, ε. For example, later in this thesis, we aim to test how our dependent variable (SREI) is associated with a dependent variable labour market demand (measured by jobs density). The OLS formula would read:

$$SREI = \alpha + \beta JobsDensity + \varepsilon$$

Regressing one variable on another produces a number of key statistics that can used to assess whether the independent variable has an impact or not (the t-value, R-squared and the significance level), what the direction and strength of the association is, and the proportion of the dependent variable that is explained by the independent variable. The t-value is used to test the null hypothesis of no association between the dependent and independent variable, returning a t-value and a significance level. Larger t-value (+/-2 as a rule of thumb) and smaller significance levels (<0.05, again as a rule of thumb) give greater confidence that an observed association is genuine rather than a product of sampling error. The R-squared value shows the coefficient of multiple determination, or more simply, the 'goodness of fit' of the model. Where there is more than one independent variable, as in multiple regression, the adjusted R-squared is used instead, since the inclusion of more independent variables will inflate R-squared even if the actual variables are not significant (Wonnacott and Wonnacott: 497).

If certain conditions are met, ordinary least squared (OLS) estimates of the constant (α) and the slope (β) will be BLUE: Best, Linear, Unbiased Estimators (Pryce, 2003). This is what makes the technique of regression attractive to social scientists. In order for the model to be BLUE, certain conditions have to be met. First, the equation is assumed to be correctly specified: a linear (straight-line) relationship, with no relevant variables omitted (which might lead to omitted variable bias) or irrelevant variables included, and with no errors in the measurement of variables. Second, the error term (ε) is assumed to have a long-term mean value of zero and constant variance (homoskedasticity). Third, the explanatory variables (x_1, x_2 etc.) are assumed to be independent (Pryce, 2003). Fourth, independent variables are assumed to be either completely uncorrelated with each other or, where they are correlated, the degree of intercorrelation is assumed to be as limited as possible (Wonnacott and Wonnacott, 1990: 501-505). In practice, it is difficult to ensure that all these conditions are satisfied (even the best regression models are likely to have some omitted variables, for example). However, clarity about theory and careful choice of data can go some way towards meeting them.

3.4.4 Logistic regression and the odds ratio

OLS regression is an appropriate tool when the dependent variable is an uncensored scale numeric variable: that is, continuous and measured for all cases in the sample. This makes it useful when we are trying to 'explain' the distribution and change in the percentage of working-age people describing themselves as permanently sick and disabled across the counties of Britain, for example. Where the dependent variable is not continuous or measured for all cases (e.g. where it is drawn from categorical data), alternative approaches are required for the resultant model to make sense. For example, in Chapter 7, the focus is on trying to discover the key reasons behind someone claiming Incapacity Benefits or not, a simple binary dependent variable. In this case, we use binary logit, more commonly called logistic regression.

Logistic (or logit) regression offers a way to transform data of this kind into a form that be modelled using linear regression techniques. This is achieved using a link function which

can produce a continuous variable based on odds ratios (e.g. predictions that lie between 0 and 1).

Odds are the chance or probability of one event occurring compared to it not occurring (Bland and Altman, 2000). Table 3.1 shows how this works in practice, showing a standard 2 X 2 table showing whether someone is claiming IB by whether their father worked or not when they were 16.

The odds of claiming IB can be calculated for these two groups:

- Odds of claiming IB where father working = 92/5901 = 0.016
- Odds of claiming IB where father not working = 43/863 = 0.049

Odds are different from probabilities: the latter looks at the fraction of the time we can expect an outcome to occur (between zero and 1). An odds of 1 translates into a probability of 0.5, for example: the chance of claiming IB against not claiming IB would be the same in a given set of circumstances. The probabilities for the two examples above would be:

- Probability of claiming IB where father working = 92/(92+5901) = 0.015
- Probability of claiming IB where father not working = 43/ (43+863) = 0.046

Table 3.1 The Odds Ratio: a worked example

		Father working	
		Yes	**No**
Claims IB	**Yes**	92 (a)	43 (b)
	No	5901 (c)	863 (d)

The odds ratio would be calculated by dividing the two sets of odds ratios:

OR = Odds of claiming IB where father working/ Odds of claiming IB where father not working

= (92/5901)/(43/863)

= 0.016/0.050

= 0.31.

So having a father working results in a l*owered* odds (OR <1) of claiming IB compared to those whose father was not working. The Odds Ratio can range from 0 to infinity. In logistic regression, the OR is transformed by raking logs, giving a continuous variables which runs from minus infinity to plus infinity. Regression coefficients thus show the impact of each independent variable on the log OR. To see the impact of each variable on the OR, one takes the exponent of the coefficient.

Outputs from logistic regression are usually non-linear, reflecting the nature of the dependent variable, which makes interpretation difficult. Each change in the value of the constant will have a varied impact on different values of the dependent variable (Pryce, no date given). Matters are made even more complex when we introduce more than one explanatory variable, to create a multivariate logistic model. This is desirable here since (as discussed in the Literature Chapter and Chapter 6 and 7) a number of factors, including family, health and employability and structural issues, might have an impact on the prospects of claiming IB. The complexity increases, though, since (as with multiple linear regression), the effect on the dependent variable will vary according to the values of all the explanatory variables.

In the more detailed logit tables shown in Chapter 7, comparisons are made between the odds of claiming IB if cohort members have a particular characteristic compared to the odds for those in the reference category. For example, in Table 7.9, the proportionate change in the odds for claiming IB if their mother was in work (compared to the odds claiming IB those those whose mother was not in work) was 0.535, once all the other factors are taken into account. This suggests that (if all the variables remain significant), having a mother in work reduces the odds of someone claiming IB, controlling for the other variables in the model. The final two columns show the confidence intervals for the odds ratios for each variable. Where these do not overlap with 1 (the odds are the same for each group), the characteristic has a statistically significant effect on the odds of claiming IB. Where there is some overlap,

the p-value for significance must be examined: a p-value of < 0.05, for example would indicate that the odds of claiming IB are statistically different 19 times out of 20.

The main data source used for the logistic regression is the British Cohort Study 1970 (BCS70), discussed in more detail in the sources sections. Since the BCS70 is a special kind of panel survey – where the same individuals are followed over several years – we might in theory use panel logit methods to control for unobserved heterogeneity (i.e. unmeasured effects) that might influence young adults risk of moving into sickness-related economic inactivity (Hsiao, 2003). Individuals are effectively used as their own control. While appealing, this process has not been adopted because almost none of the variables of interest appeared in both 1986 and 2000. (Scores on the GHQ-12 questionnaire are a rare exception). What is being presented in this thesis is a cross-sectional model with some historic data (on family background and place of residence): future research, beyond the scope of this thesis, might reasonably extend it to include more fully longitudinal elements.

3.6 Key concepts: definitions and geographies

This section is divided into two. The first part describes how the concept of SREI is defined in this thesis, both in surveys (including the Census) and in benefits data. It also outlines how continuity is these definitions was maintained over time and provides some detail on the extent to which SREI can be compared between survey and administrative sources. The second half of this section discusses key geographies: it justifies the use of counties as the smallest spatial unit at which data is presented and how consistent boundaries were maintained through time. It also provides a rationale for grouping counties into "economic clusters" for summary analysis.

3.6.1 Defining sickness-related economic inactivity

In this thesis, sickness-related economic inactivity (SREI) is defined as: *working age people (aged 16-59/64) not currently looking for or available for work, whose status is attributed (either by themselves or others) to sickness or disability*. It thus embraces working-age people claiming long-term Incapacity Benefits (who are defined as SREI by the benefits

system) and working-age people describing themselves as economically inactive, long-term or permanently sick and disabled in nationally representative surveys.

How do the SREI fit into the broader labour market? Using internationally agreed definitions, the working-age population of Britain (aged 16-59/64) can be divided into three categories:

- **Employed:** anyone who carried out at least one hour of paid work in the previous work, is temporarily away from work (e.g. on holiday), does unpaid work for a family business or is on a government supported training scheme.
- **Unemployed:** anyone out of work, who wants a job, has actively sought work in the past four weeks and is available to start work within the next two weeks.
- **Economically inactive:** anyone without a job not meeting the criteria to be classified as unemployed (ONS, 2009).

In practice, these definitions are not as clear cut as this implies. For example, up to a third of the economically inactive report that they 'want work', though they are not currently seeking a job (Barham, 2002). The principal focus here is on the economically inactive in relation to the labour market. They are a diverse category, including students in full-time education, the retired, those looking after home and family, the long-term sick and disabled and those inactive for other reasons. While some economically inactive can (and do) report they want to work, they are not counted as unemployed because they are generally unable to start work immediately (Leaker, 2009).

In this thesis the focus is with those whose inactivity is mainly defined, whether by themselves or others, as attributable to long-term health problems or disability. The concept straddles both the social and medical models of disability (see Chapter 2), in that it is potentially both a description of individual circumstances and a position 'enforced' by social structures. There are two main ways of measuring *sickness-related* economic inactivity (SREI) in Britain:

Surveys: Many surveys ask respondents whether their day-to-day activities or labour market participation is limited by a health problem or long-term disability; the Labour Force Survey also has a specific category of economic inactivity *'long-term sick and disabled'*. In the 1981, 1991 and 2001 Censuses, respondents were also given the option of describing their main economic status as *'permanently sick/disabled'*. The Census measure will form an important component of this thesis, because of its value in describing the extent and evolution of the problem at a local area level through time. Explicitly excluded are people describing themselves as '*temporarily sick'*: they are considered to be unemployed (see section 3.4.1 for more on this). What constitutes 'long-term' and 'permanent' sickness and disability may be interpreted differently by different people at different times. A single survey is unlikely to permit all the issues involved to be explored in depth.

Administrative data: In Britain, systems of financial support for those unable to work long-term because of sickness and/or disability have existed since the 1970s (see Burchadt, 1999, for a survey). In 1971, a contributions-based, non-means tested benefit for the economically inactive with health problems, known as Invalidity Benefit (IVB), was introduced. IVB was replaced by Incapacity Benefit (IB) in 1995, which was itself replaced by Employment Support Allowance (ESA) for new claimants in 2008. Those who lacked the national insurance contributions to qualify for IVB/IB could apply for means-tested benefits: Non-Contributory Invalidity Pension (NCIP) until 1984, which was renamed Severe Disability Allowance (SDA), until its abolition in 2001 (Burchardt, 1999). Actual income for those without sufficient N.I, contributions was paid through Supplementary Benefit, or from 1988, Income Support with Disability Premium.

As a group, the benefits discussed above are collectively referred to in this thesis as *'Incapacity Benefits'*. Table 3.2 shows how continuity in describing sickness-related economic inactivity through benefit claimants was maintained through time. Note that the benefits measure excludes working-age claimants claiming Incapacity Benefits or sickness benefits for less than six months, since this is likely to include many people who would consider themselves *temporarily* incapacitated by sickness or disability.

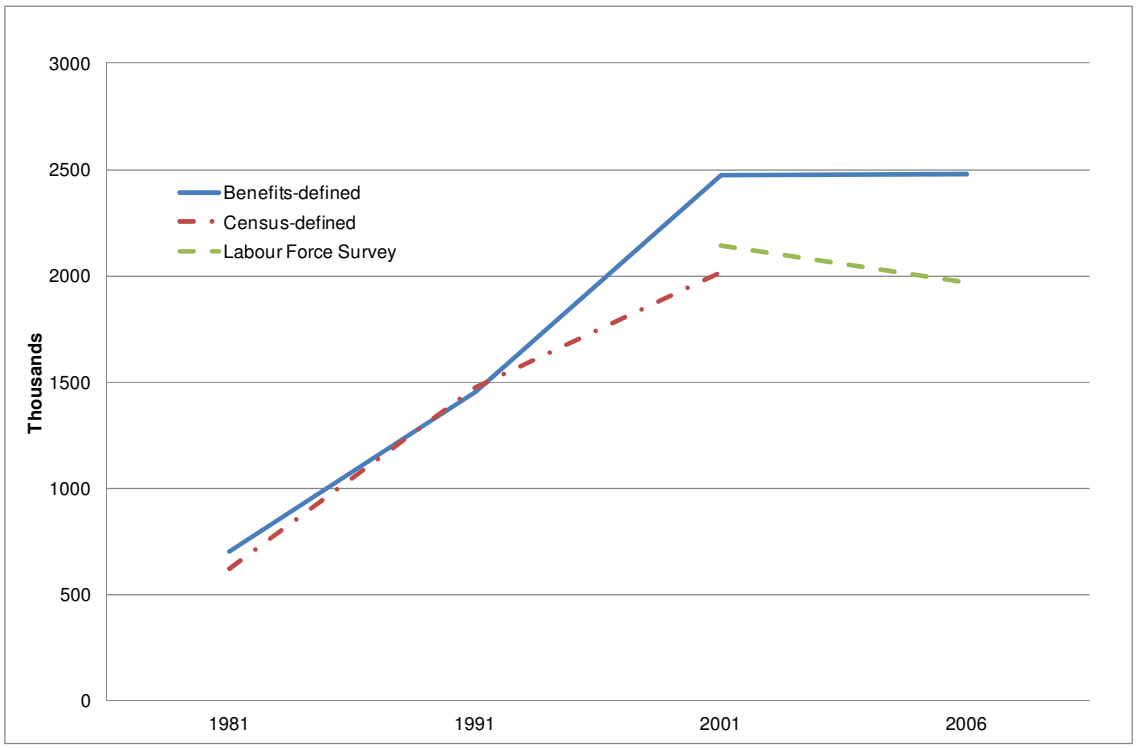
Table 3.2: Maintaining continuity in definitions of 'Incapacity Benefits' through time

Time period	Non-means tested	Means tested
1981-1983	Invalidity Benefit (IVB)	Non-Contributory Invalidity Benefit (NCIP) Supplementary Benefits with Disability Premium
1984-1987	Invalidity Benefit (IVB)	Severe Disability Allowance (SDA) Supplementary Benefit with Disability Premium
1988-1994	Invalidity Benefit (IVB)	Severe Disability Allowance (SDA) Income Support with Disability Premium
1995-2001	Incapacity Benefit (IB)	Severe Disability Allowance (SDA) Income Support with Disability Premium
2002-2008		Income Support with Disability Premium Incapacity Benefit (IB)
2009-		Employment and Support Allowance (ESA)

Note: Incapacity Benefit was replaced by Employment and Support Allowance (ESA) for new claimants in October 2008.

The main difference between the administrative and survey measures is who allocates individuals to a particular category. Respondents make the decision themselves in surveys, whereas the Incapacity Benefits caseload is determined by a mixture of administrative rules, medical evidence and willingness to claim. The situation is complicated by societal changes in how people respond to survey questions and changes in the technical detail of questionnaires. For instance, the Census included 'temporary sickness' as a distinct category in 1981 but not in 1991 and 2001, and there is a suggestion that the economically inactive may have become more willing to attribute their economic status to health problems than in the past ('justification bias').

Figure 3.2: Sickness related economic inactivity among working-age people (aged 16-59/64): Britain, 1981-2006



Sources: 1981, 1991 and 2001 Censuses of Population; 2006 Labour Force Survey; 1% sample, Social Security Statistics, 1981, 1991; DWP WPLS 100% sample 2001 and 2006.

Definitions

Benefits-defined: Working-age people claiming long-term Incapacity Benefits as described in Table 3.1. Short-term claimants (less than six months) have been excluded from the total shown.

Survey-defined: Census figures include those describing themselves as 'permanently sick or disabled' (1981), those whose status was' unable to work because of long-term sickness or disability' (1991) and those who were 'permanently sick and disabled' (2001). 2006 data from the LFS includes those who were 'economically inactive, long-term sick or disabled' (LFS April 2006-March 2007).

Comparing the two measures provides some useful insights into how sickness-related economic inactivity has evolved in Britain over time (*Figure 3.2*). Both the survey and the benefits-based measures tracked upwards over time in the two decades after 1981. There is some divergence after 2001, with the survey measure showing a slight fall and the benefits measure a small increase. Although the figures shown are extracted from separate datasets and count different individuals they suggest that the survey and benefits measure are in reasonable agreement with one another, at least for working-age people at a national level. This should be tempered by a further point: the tendency for surveys to produce lower estimates of sickness-related economic inactivity than analysis of the benefits caseload.[9] In Britain, for three of the four time points shown, the number of working-age people defined themselves as permanently or long-term sick/disabled was a fifth fewer than actually claimed IB. [10]

The jump in the ratio in 1991 is also particularly noticeable. While in 1981 and 2001, Census respondents could describe themselves as 'permanently sick or/and disabled', the comparable category in 1991 was '*unable to work* because of long-term sickness or disability' [emphasis added]. Although it might be expected that the former category might produce a higher number than the latter, the early 1990s were the mid-point of a strong growth phase in the IB caseload (Anyadike-Danes and McVicar, 2008). This lends some credibility to the 'hidden unemployment' thesis, with labour market issues perhaps featuring more prominently in new claimants' perceptions in 1991. Survey and benefits measures, both then, provide some useful insights into the problem: they will be used in this thesis to describe SREI and explain its changing composition at a local and national level.

[9] Also note the survey measure switches from 'permanently sick/disabled' to 'long-term sick or disabled' between the 2001 census and the Labour Force Survey: this difference in definition makes little difference for the working-age cohort as a whole, but is important to bear in mind when considering different age groups.

[10] Chapter 7 provides some direct comparisons between working-age people's self-reported economic activity and their benefit status, through the Labour Force Survey.

3.6.2 Choice of geographies I: counties

Understanding the variation and change over time in sickness-related economic inactivity between different places is a key element of this thesis. In the social sciences, 'place' and 'space' have clear definitions. Spaces are conceived as areas defined in terms of physical boundaries. Places are defined rather by the meaning people attach to geographies and/or by the human activities that take place within them. Places are much more fluid: for example, their boundaries and the way they are thought of can change through time (Cresswell, 2009). Both places and spaces can be drawn at different geographical scales, from neighbourhoods to nations. In this thesis, 'places' is used as shorthand for the spaces of counties (with fixed boundaries, but reflecting self-contained sub-regional labour market activity) and economic clusters (groups of counties, defined by shared meanings of economic function and history).

The lowest geographical unit of analysis chosen for this task was the British county: or to be more precise, the English and Welsh counties and Scottish regions that existed between 1974 and 1995. For brevity, the term 'county' is used to cover both throughout this thesis. Northern Ireland was excluded from analysis because of a lack of comparable data.

Counties were chosen for several reasons. As noted more than twenty years ago, regions are not the most useful unit to describe labour market change in Britain: *"too small to be self-contained economies but too large to function as local labour markets"* (Fothergill and Gudgin, 1982:14, 16). Local/unitary authorities have been used elsewhere to describe trends in IB and they are invaluable at describing important differences within regions (Beatty and Fothergill, 2005; Beatty and Fothergill, 2011). However, they may be too small to adequately reflect local labour markets, because of large-scale commuter flows across administrative boundaries, particularly into cities (Beatty and Fothergill, 2005). Intermediate-sized areas, between the level of the region and district, may be the best trade-off. Units of this size, larger than local authorities but smaller than regions have been used elsewhere to describe functional economic, social and labour market connections across space (Derek Halden Consultancy, 2002; ODPM, 2006). The most obvious choice of geographies that meet this criteria are NUTS2 areas, Travel-to-Work Areas or counties. All

three are large enough to be relatively self-contained (and thus accommodate commuter flows between hinterlands and employment centres such as cities). NUTS 2 areas were not chosen because they were fewer in number than counties (36 across Great Britain, compared to 67 counties), limiting the number of labour markets to be compared. Travel to Work Areas (TTWAs) were rejected as a unit of analysis mainly because they were revised on three occasions between 1981 and 2001: this prompts the question of *which* TTWA boundaries to use to produce consistent, relatively self-contained labour markets through time (since changing the boundaries would defeat the purpose of a time series). Finally, counties have been widely used in the economics literature: to describe the 'North South divide' (Martin, 1988), to measure employment and new firm foundation (Ashcroft and Love, 1996; Ashcroft et al, 2007), to examine local wage rigidity (Martin and Tyler, 1994) and the association between earnings and unemployment (Manning, 1994); and in studying the impact of migration on local labour markets (Dustmann et al, 2003).

Of course, any choice of geographical unit might be open to the accusation of *"deliberate manipulation of cartographic information to support political agendas"* (Alvanides, Openshaw and Rees, 2002: 49). Just as smaller geographical units may misrepresent labour market demand, larger geographical units, including counties, may 'wash out' and thus understate, some differences in supply-side characteristics. Nevertheless, counties remain small enough to identify real variation in supply-side indicators, including unemployment, workforce skills, local housing costs and health (Green and Owen, 1998; Brunello and Gambarotto, 2007; Patacchini and Zenou, 2006; Barker et al, 1990) and can be considered a reasonable unit to undertake local labour market analysis.

Appendix 6 shows how boundary continuity was maintained for the counties through time. Boundary changes to local authorities affected nine counties. In three counties (Surrey/Buckinghamshire/Berkshire) the changes had a negligible impact, changing the population of each county by +/-0.5%. In two further counties (South Glamorgan and Powys) the impact was small (1.5-2.4%). In four counties (Clwyd, Gwent, Gwynedd and Mid-Glamorgan) boundaries changes had a much more substantial impact: to compensate for

this, areas were merged to create two larger geographies with consistent boundaries through time, Clwyd- Gwynedd and Mid-Glamorgan-Gwent. It was necessary to combine several Welsh counties (Clwyd-Gwynedd and Mid Glamorgan-Gwent) to create areas with consistent boundaries through time. Inner and Outer London were also combined into a single unit (Greater London), reflecting the high levels of commuting between Inner and Outer London. (Although this still underestimates the reach of the *functional* London labour market, given the extensive commuting flows and linkages into the Greater South East.) This reduced the final list of counties from 67 to 64. 1981 and 1991 Census data was already published for the English and Welsh counties and Scottish regions, and could be readily aggregated from local/unitary authority data from the 2001 results.

3.6.3 Choice of geographies II: Economic clusters

The second level of geographical unit used for analysis was the economic cluster. This process was selected after consideration clustering of two alternatives: by National Statistics 2001 (NS-2001) output area classification and by Government Office Regions. NS-2001 output area classification uses Census area characteristics to allocate geographic units to eight Supergroups, which are further divided into 13 groups and 24 sub-groups. Government Office Regions (GORs) divide the UK into 12 units (nine English regions, Scotland, Wales and Northern Ireland). Using NS-2001 area classifications would provide a finely delineated match with the economic and social characteristics of small areas (e.g. identifying industrial areas surrounded by rural communities, such as Barrow-in-Furness or Kingston-Upon-Hull). However, the process of re-allocating 1981 and 1991 Census data to NS-2001 output areas would be a complex and time-consuming one and the default geographies, local authorities, would not reflect self-contained labour markets. The issues with GORs are the reverse: it would be a simple task to allocate counties to these clusters, but this approach would fail to recognise the deep spatial divided within regions (e.g. between North and South Wales, West Central and East Central Scotland).

As a compromise, the decision was taken to group together data from individual counties to describe the overall performance of different types of counties according to their historical economic function and urban form. This reflects the importance of industrial restructuring and place-related labour demand issues discussed in the literature on SREI. The clustering process drew on existing literature to identify five distinct clusters.

Coalfield Counties and Industrial Legacy (12 counties): Nine coalfield counties were identified from a mix of literature and Census data, based on their employment in coalmining in 1981 (ODPM, 2003; Beatty and Fothergill, 1996). These included two South Wales & the Valleys areas (Mid Glamorgan-Gwent and West Glamorgan), two northern counties (Durham and Northumberland), three Midlands counties (Derbyshire, Nottinghamshire and Staffordshire) and two Scottish regions (Central and Fife). Tayside, Lancashire and Cleveland were also included in this category because of their industrial legacy.

Conurbations (7 counties): this category includes the six English Metropolitan counties (the West Midlands, South and West Yorkshire, Merseyside, Greater Manchester, Tyne and Wear). With populations ranging from 1m-2.5m people, these areas developed alongside the industrial revolution (Lupton and Power, 2004) and were defined until the 1970s by their production and transportation industries. Strathclyde region in West Central Scotland was also included as a proxy for the Central Clydeside Conurbation. Although Strathclyde covers an area one third larger than the Conurbation, extending over rural Ayrshire and Argyll and Bute as well as Inverclyde, there is precedent for this approach elsewhere (Champion and Fisher, 2003).

Greater London (1 county): the diversity and size of the capital suggests that it belongs in a distinct category on its own. In recent years, it has had quite different levels of economic growth and population movement (Champion, 2005).

Prospering Britain (24 counties)*:* Using published data Gross Disposable Household Income per capita, more affluent counties (with a GDHI above the UK average) were included in this cluster. Cambridgeshire, Wiltshire and Oxfordshire (who also met the rurality criterion) were allocated to Prospering Britain due to their knowledge intensive economies and high jobs density. The majority of counties included here form the Home Counties or the Greater London commuter belt, but the Lothians and Grampian regions of Scotland, together with South Glamorgan, were added because of their stronger labour market performance between 1981 and 2001.

Rural and Coastal Britain (22 counties)*:* Urban/rural classifications were used to identify predominantly rural areas, with more than half their population resident in non-urban areas. Twelve English counties, three Welsh counties, the Highlands and Islands, the Scottish Borders and Dumfries and Galloway met this criterion (Scottish Government, 2008; White and Tippireddy, no date given). North Yorkshire, Dorset and Humberside were assigned to

this cluster because of their geographical location. The final allocation of counties within each economic cluster is shown below (Table 3.3).

Table 3.3: British counties within each 'economic cluster'

Cluster name	Counties
Coalfields and Industrial Legacy areas (12)	Central; Cleveland; Derbyshire; Durham; Fife; Lancashire; Mid Glamorgan-Gwent; Northumberland; Nottinghamshire; Staffordshire; Tayside; West Glamorgan
Conurbations (7)	Greater Manchester; Merseyside; South Yorkshire; Strathclyde; Tyne & Wear; West Midlands; West Yorkshire
Greater London (1)	Inner London; Outer London
Prospering Britain (24)	Avon; Bedfordshire; Berkshire; Buckinghamshire; Cambridgeshire; Cheshire; East Sussex; Essex; Gloucestershire; Grampian; Hampshire; Hereford and Worcester; Hertfordshire; Kent; Leicestershire; Lothian; Northamptonshire; Oxfordshire; South Glamorgan; Suffolk; Surrey; Warwickshire; West Sussex; Wiltshire
Rural and Coastal Britain (22)	Borders; Clwyd-Gwynedd; Cornwall, Isles of Scilly; Cumbria; Devon; Dorset; Dumfries & Galloway; Dyfed; Highland; Humberside; Isle of Wight; Lincolnshire; Norfolk; North Yorkshire; Orkney Islands; Powys; Shetland Islands; Shropshire; Somerset; Western Isles

Where the data sources used made it impossible to report on counties and clusters, the strategy was to present second-best comparisons. Chapter 7 gives one example of this approach: the Labour Force Survey collected only limited data at a sub-regional level, so here the employment rates of young adults in the South and East of England (where most, but not all, of the Prospering Britain counties were located) were compared against those for young adults in the Conurbations, Greater London and the Rest of Britain. Chapter 4 provides another: vacancy data from the major employers' surveys was unavailable at county or local authority level, so comparisons with the unemployment claimant count use Learning and Skills Council, Area Plan and Local Enterprise Company boundaries.

3.7 Data sources used, strengths and limitations

As discussed in more detail in section 3.2.3 (see above), this thesis relies on a range of secondary data to address the key propositions. The data sources used can be divided into two main types: surveys (including the Census of Population) and administrative data (comprising mainly, but not exclusively benefits statistics). This section will briefly outline the main features, strength and limitations of each source and how it was exploited to address the key research questions this thesis seeks to answer.

3.7.1 The Census of Population

Used here to explore SREI in Britain across *space and time* between 1981 and 2001, the decennial Census aims to achieve a complete count of all people living in the UK on Census Day and is regarded as a 'gold standard' of data collection. The Census also provides the basis for population estimates for small areas so underpins surveys such as the Labour Force Survey. Near-universal coverage (94% of UK households returned forms for the 2001 Census) means it offers a high degree of accuracy. It is geographically comprehensive, with robust data available at many spatial levels (Rees, Martin and Williamson, 2002). Particularly because of this, it is one of few sources available to researchers interested in tracking social and economic change at a 'small area' level in Britain. Comparing the results of three Censuses also allows us to examine change over a relatively lengthy 20-year period (Champion, 1995). In addition, the Census was designed – unlike administrative data – to be used for research (Boyle and Dorling, 2004; Tunstall, 2005).

Three rounds of Census data (1981, 1991 and 2001) were obtained from a variety of sources. Economic activity data from the Census for *working-age* people (males aged 16-64 and females aged 16-59) is not available electronically for 1981: on-line tables for that year give global figures for all people aged 16+. To overcome this problem, the hard copy data for 1981 was accessed through Glasgow University library and transcribed into electronic format, minus males over 64 and females over 59. 1991 and 2001 data was accessed from the CASWEB online database maintained by Manchester University. Workplace employment statistics for 1981 and 1991 were obtained from the Special Workplace Statistics published through the CIDER online database maintained by the University of Leeds and the

University of St. Andrews. 2001 workplace employment data was obtained from NOMISWEB and GROS.

Using the Census to measure social and economic change in Britain through time is not without its limitations. Those most relevant to this thesis are: changes in geographies at which the Census data was collected; changes in definitions and questions between Censuses; differences in the way population bases were defined; under numeration of certain groups; and item non-response (Champion, 1995; Tunstall, 2005; Simpson, 2002). All of these are problematic, since they increase the risk of artefact (i.e. change driven purely by the way information is collected and analysed, rather than the real processes at work in society). Geographical continuity was less difficult to deal with (see above), since the final building blocks chosen, counties, were relatively large. Changes in definitions and questions, issues about the population base, under- numeration and item non-response are more problematic and are worth discussing in more detail.

As much as possible, every effort was made to ensure definitions used in the three Census rounds were comparable, by ensuring continuity of age structure, combining categories etc[11]. But even so, some discontinuity may still be present. In addition to the different wording of the question of permanent sickness/disability in 1991 highlighted earlier, there are two obvious areas where this might take place. First, the category 'temporary sick' was absorbed into unemployment in 1991 whereas it had been a distinct economic activity in 1981. Although the Census forms in 1991 and 2001 indicated that the temporary sick should consider themselves unemployed and seeking work, some respondents in this position may have allocated themselves to the permanently sick/disabled category. Second, the treatment of students, who in 1981 were treated as wholly economically inactive but in 1991 and 2001 were split between economically active and economically inactive. To ensure comparability, only students economically inactive were counted in the three rounds shown. Economically active students were assumed to be employed. Since some of these would in fact be

[11] See Appendix 5 for how continuity in definitions was maintained.

unemployed[12], this approach is likely to overstate the fall in unemployment between 1981 and 2001, with implications discussed in Chapter 5. In principle, it might have been possible to estimate unemployed students in 2001 (either from the Census or Labour Force Survey) and reassign them to the unemployed category, but this would create a new problem of how unemployed students in 1981 were to be estimated.

[12] In April 2001, 12% of economically active young adults (aged 16-24) in full-time education in the UK were classified as also unemployed by the ONS.

Turning to the population base, strictly speaking the 'usual resident' population numbers produced for the 1981, 1991 and 2001 Census are not directly comparable (Tunstall, 2005). For the 1981 Census, the usual resident population was defined as those present at their usual place of residence on Census night: it excluded all 'wholly absent' households. At the 1991 Census, the definition of usual resident had expanded, to include those wholly resident, plus those who sent Census forms in voluntarily on their return home and those imputed by Census staff where no form was returned (Champion, 1995). The most recent Census (2001) adopted a still broader definition. As part of its 'One Number' strategy, the results of an independent Post-Census Coverage Survey were matched against individual Census records, and modelling used to produce population estimates for around 400 local authority districts or groups of districts across Britain. Comparisons were made with 1991 based estimates to assess 'plausibility', and where appropriate, individuals and household records were inputed for those missed by the Census (Diamond et al, 2002).

With three different definitions of the usual resident population (including those tables produced for the economic activities of working-age residents) measuring temporal change becomes more difficult. For instance, at least some of the rise in the absolute numbers of working-age people describing themselves as permanently sick and disabled between 1981 and 2001 could be ascribed to the widening population base over time, because the number of people included in the count has increased. In Chapter 5, where labour market accounts (LMAs) are assembled for half the British counties for 1981-2001 the dilemma is even more pertinent: the method relies on constructing robust components of population change through time. In theory, it might be possible to partly compensate for this by using the revised mid-year population estimates (MYE) published by the ONS, adjusting the Census figures by the ratio between the working-age totals captured on Census Day and the MYE. In the end it was decided to present the original, unadjusted figures rather than introduce a further level of complication. Appendix 1 provides more information on the differences between these MYE and Census data: the largest differences were seen in ten counties: Avon, Berkshire, Devon, East Sussex, Grampian, Greater London, Leicestershire, Lincolnshire, Oxfordshire and South Glamorgan.

Under-numeration, or missing people from the overall count, was present in all three Census years, but it was especially marked in 1991 and 2001. Certain population groups (especially the young, the socially excluded and those living in urban areas) were especially likely to have been missed. Although this was adjusted for by the ONS by using synthetic estimates, this method meant that final figures were more uncertain in areas with a higher undercount. Furthermore, item non-response (where respondents give inconsistent answers to questions, or failed to respond) was notable for workplace addresses, economic activity, industry of employment and several other questions relevant to this analysis (Simpson, 2002; Simpson, 2003). As a consequence, the scale and nature of change between Censuses may be misrepresented, especially in terms of its impact of the most marginalised. This limitation must be acknowledged, but in practice, it is difficult to adjust for without access to the raw Census micro-data.

3.7.2 The Labour Force Survey

The Labour Force Survey (LFS) is a large-scale, cross-sectional survey designed to collect information on the labour market characteristics of individuals living in private households in the United Kingdom. It was exploited here primarily to examine the *individual* dimension of sickness-related economic inactivity, with time and space secondary concerns. The first LFS was conducted in 1973 and carried out every two years until 1983. In 1984, the methodology was changed: results were published annually and constructed from two elements, a quarterly survey of 15,000 private households and a 'boost' survey carried out in the Spring of 44,000 private households. In 1992, the methodology changed once again, with the sample increasing to 60,000 private households each quarter allowing results to be published each quarter. In May 2006, the LFS moved to collect data on a calendar year basis.

The LFS was rejected as the main means to analyse trends in sickness-related economic inactivity because of severe limits on both benefits data and sub-regional geographies before the mid-1990s. Information on whether respondents were claiming Incapacity Benefits was only collected from Spring 1994, which means there is no data available during the seven years preceding that, during which the IB caseload grew so dramatically. In the 1979-1993

period the only benefits data collected by the LFS covered those claiming unemployment benefits. In addition, the LFS permits only limited historical sub-regional analysis. From 1984-1991, the LFS collected data on respondents' area of residence analysis of data for the five English metropolitan counties and Inner and Outer London. Scotland can be separated into two: Central Clydeside and the Rest of Scotland and (from 1992) Strathclyde and the Rest of Scotland. No sub-regional data is available for Wales for this period. Local area data was available from 1995 onwards. Between 2000 and 2003, boosts were introduced to the LFS to improve the quality of local labour market information in England, Scotland and Wales. In 2004, a further enhancement to the LFS, the Annual Population Survey was introduced, designed to produce a representative sample of economically active residents for all local authorities in Britain.

On the other hand, the LFS was selected as an effective means of scrutinising the labour market characteristics of young adults claiming Incapacity Benefits in Great Britain. Although Kemp and Davidson (2007) published the results of a nationally representative survey, their analysis was confined to new claimants (within the last three months) and did not permit direct comparisons to be made with either the 25-59/64 year old IB claimants or with young adults claiming Job Seeker's Allowance (JSA), both groups who might be expected to 'competing' with young adult IB claimants for labour market opportunities. For this reason, it was decided to undertake original analysis based on the LFS datasets deposited with the UK Data Archive. In order to increase the robustness of results, eight quarters of data, covering the period January 2006-December 2007 were combined. Only respondents who were interviewed in the first wave of each quarter were included, thus removing any duplicate cases. Final sample sizes were 286 young adults claiming IB, 630 young adults claiming JSA and 5,860 25-59/64 year olds claiming Incapacity Benefits.[13]

[13] Compared to 265 young adults in the Kemp and Davidson (2007) report.

3.7.3 The British Cohort Survey 1970

The first sweep of the British Cohort Survey (BCS70) was known as the British Births Survey and collected data on 17,000 babies born in Great Britain during one week in April 1970. Its initial purpose was to examine the association between mothers' social and economic circumstances and the health of their children in 1970 and compare those results with a previous cohort survey, the National Child Development Study, conducted 12 years earlier. Over time, the BCS evolved in an ad-hoc fashion, with the original cohort followed up seven times over the next 38 years (Elliot and Shepherd, 2006).

For this thesis, the value of the BCS70 was in exploring the extent to which past events (chiefly family background, but also exposure to unemployment) as well as individual characteristics increased the risk of young adults claiming Incapacity Benefits. In this respect, it was used to address *individual and temporal* aspects of sickness-related economic inactivity, with more limited consideration given to *space*. To achieve this, three rounds of the BCS70 (the 1986 Youthscan, 1996 postal survey and 2000 interview) were obtained from the UK Data archive and linked using the key identifiers for cohort member (CM). It should be noted that the BCS70 is unweighted. Table 3.4 provides basic descriptive data on the total observed sample, total non-response rate and non-response rates for relevant items for these three rounds. The dip in response rate for the 1996 round (to 55%), largely because this was postal survey, is clearly visible. In addition, the table also shows the lower response rates in 1986 to the family variables (including social class).

From information obtained from parental questionnaires in the 1986 sweep, it was possible to derive four new variables: social class (based on CM's father's social class), mother's and father's employment status, and whether the cohort member had a father figure. A single variable (ever unemployed) was used from the 1996 postal survey.

In the 1999/00 survey, the dependent variable IBSDA was created from information on benefit status. IBSDA includes all cohort members receiving Incapacity Benefit; national

insurance credits as part of sickness benefits; Severe Disablement Allowance; and Income Support claimants with a longstanding illness or disability that limited the paid work they could do. The inclusion of this last category may partly inflate the true number of IBSDA claimants in the BCS70 cohort, but it is a reasonable proxy for Income Support claimants with Disability Premium, which could not be derived directly from the dataset.

Variables on mental health, soft skills and attitudes towards employment and learning were also derived. Health variables included a GHQ-12 score (which uses responses to 12 questions about social and mental health function in the last four weeks to measures common mental health problems) and a variable to give an indication of problematic drug use. Adapting the definition used by the European Monitoring Centre for Drugs and Drugs Addiction[14], problem drug users were defined as cohort members who had ever tried cocaine, crack, heroin or methadone.

Those on attitudes to employment and learning were derived from cohort member's level of agreement or disagreement on a five-point Likert scale with four statements (*Any job better than being unemployed; If I didn't like a job I'd pack it it; The effort of getting qualifications is more trouble than its worth; It's important to hang onto job even if unhappy).* Responses to each question were simplified into two categories (agree/not agree). For the 'soft skill' categories, cohort member's were asked to rate how good they were at working in a team, problem solving and communication skills. (These categories were selected since these are consistently the 'soft skills' that employers rate highly – see for example Learning and Skills Council, 2008). Their responses (good-fair-poor-don't have this skill were simplified into binary choices (good/fair or poor/don't have this skill).

[14] Who define problem drug use as 'injecting drug use or long-duration/regular use of opioids, cocaine and/or amphetamines'.

Table 3.4: Observed samples, response rates and item non-response rates in the BCS70 1986, 1996 and 1999/00 datasets

	1986	1996	1999/00
Response rate	69.4%	55.3%	70.1%
Observed sample	11,621	9,003	11,261
Variables	No father (81%) GHQ86 Mother in work (59%) Social class (59%) Father in work (59%) Cluster (99%)	Ever unemployed (97%)	Problem solving Team skills Comm skills Qualy 2000 CAGE Problemdrug Effort qual Any job GHQ-12 IBSDA

One of the original approaches in this thesis is to explore geography in the BCS70. District health authority (DHA) codes attached to this dataset were used to allocate CM's to counties, so that their 1986 area of residence could be described as: Greater London, Prospering Britain, Coalfields & Industrial Legacy, Conurbations or Rural and Coastal Britain. A second derived place variable was created by collapsing these into two categories (Coalfields & Industrial Legacy/Conurbations and Greater London/Prospering Britain/ Rural and Coastal Britain). This approach, however, is not without its limitations. First, it is assumed that the effect of these measures on cohort members will not vary through time. However, this is unlikely to be the case, mainly due to migration. The age group being studied (aged 16-29) is highly geographically mobile (Champion, 2005) a characteristic likely to be reinforced by the expansion of HE in the 1990s, as more young adults moved away from home to study. Second, young adults from urban areas (especially young disadvantaged males) are more

likely to be lost to attrition from longitudinal surveys (Lynn et al, 2005). As a consequence, findings on the Conurbations and Greater London should be interpreted with more caution.

3.7.4 Psychiatric Morbidity Survey of Adults in Private Households

As its name suggests, this was a survey of adults (aged 16-74) living in private households in England, Scotland and Wales. Conducted in 2000, it aimed to collect data on the prevalence of mental health problems among this group (Singleton, Lee and Meltzer, 2001). Its purpose here was to add a fresh layer to the *individual* dimension of sickness-related economic inactivity by providing non-administrative data on the mental health problems of IB claimants. The first stage of interviews were carried out by lay interviewers (i.e. people without clinical training) using the Revised Clinical Interview Schedule (CIS-R). This consisted of 14 sub-sections, each with a group of questions designed to detect neurotic symptoms and disorders. The analysis in this thesis (see Ch. 6) follows the convention choosing a CIS-R score of two or more as the cut –off threshold for those with mental health problems. A score of two or more on the CIS-R indicates symptoms of moderate to high severity (related to specific neurotic symptoms and disorders), experienced in the week before interview (Singleton et al, 2001). Results are designed to be representative at Great Britain and Government Office Region (GOR) level only.

The original dataset was accessed from the UK data archive. To create benefit claimant groups, syntax was used to recode interviewees to three categories: those receiving Incapacity Benefit, Severe Disability Allowance and those with a long-standing illness who received Income Support (*Incapacity Benefits claimants*); those receiving Job Seeker's Allowance (*JSA claimants*); and everyone else. Thus a potential source of inaccuracy is the proxy definition for those claiming Income Support with a Disability Premium, though in practice it is difficult to see how this could have been overcome. A more serious criticism perhaps is the small population bases for young adults claiming benefits present in this survey: 45 JSA claimants and 68 Incapacity Benefits claimants.

3.7.5 Destinations of Benefit Leavers 2004

Commissioned by the Department of Work and Pensions (DWP) and carried out by BMRB International, this survey was chosen as a source of information on the *place* and *individual* dimensions of the research question. It was a follow-up to the 2003 Benefit Leavers Survey, designed to establish the destinations of those finishing a claim for 'non-active' benefits (Incapacity Benefits and Lone Parents Income Support) plus those leaving Job Seeker's Allowance for an unknown destination. The sample frame was all working-age British adult residents finishing a claim for these benefits between 1 February and 14 May 2004, with the survey taking place between June and September 2004. In all, 17,166 interviews were completed with benefit leavers: 12,752 by telephone and 4,414 face-to-face (Coleman and Kennedy, 2005). 5,102 interviews were with those who finished a claim for Incapacity Benefits, including 720 young adults (aged 16-24). Respondents' local/unitary authority codes were included in the dataset, published in the UK Data Archive. These were used to produce two original geographic indicators: one for county of residence and one for economic cluster of residence, as defined in section 3.3. The BLS 2004 provides a rich seam of data on the immediate destinations of those leaving benefits, covering the whole of Britain and (within limits) providing robust sub-regional information. Importantly it includes not just statistics on 'cycling' (leaving one benefit for another), which were made available on the DWP website from 2004 onwards but also on more positive destinations – work and learning.

However, it also suffers from a number of specific limitations. It provides 'point in time' estimates only: applicable to 2004, but which may or may not remain relevant at the time of writing (2009/10). Results are not comparable with the survey of IB leavers published in 1996, because of different methodologies and time frames (Coleman and Kennedy, 2005). . In addition, it may understate the proportion of people leaving IB for other benefits ('cycling') compared to administrative data. This is because benefit leavers were first asked for the main reason they stopped claiming IB and given four options: full-time employment, full-time education, another benefit (excluding retirement benefits) or 'other'. The largest categories in the 'other' category, revealed in a follow-up question, are those who failed the Personal Capability Assessment (PCA) or those who were told they were no longer eligible

for the benefit – both groups for whom it is likely other benefits may have been their true destination. This should be borne in mind when interpreting the results.

3.7.6 Employers Skills Surveys

These surveys were used in this thesis to explore the *place* measure of sickness-related economic inactivity. It was decided to use the vacancy data from the latest point in time where local data could readily be obtained for all three countries: 2005 for England and Wales and 2006 for Scotland. English data from National Employers Skills Survey 2005 was obtained at local Learning and Skills Council level from the Learning and Skills Council Research Tools Web Site.[15] Response rates to NESS were reasonable in the context of this type of survey (43%), with a total of 74,835 employers interviewed between May and August 2005 (Shury et al, 2006). For Scotland, the total number of reported vacancies reported by employers at a local level was downloaded from the Future Skills Scotland Key Indicators website.[16] The original source was the Scottish Employer Skills Survey 2006, based on interviews with 6,276 employers between June and July 2006 (Future Skills Scotland, 2007). Local vacancy data for Wales proved more difficult to obtain, since there is no longer a distinct entity called Future Skills Wales. In the end, local estimates of employers' vacancies in 2005 were obtained from the Welsh Assembly Government's Department for Children, Education, Lifelong Learning and Skills.[17] The original source was the Future Skills Wales (FSW) 2005 Sector Skills Survey, based on interviews with 6,719 organisations undertaken between March and May 2005 (Future Skills Wales, 2005).

The form in which data was published for the Employers' Skills Surveys meant that in this case, the preferred geography of counties had to be abandoned. In England, vacancy data was obtained for 46 Local Learning and Skills Councils (figures for Bedfordshire and Luton were suppressed because of statistical unreliability). For Wales, the smallest geographies at

[15] Available at: http://researchtools.lsc.gov.uk/KMSResearchTools/

[16] Available at: http://www.keyindicators.org.uk/

[17] From Jackie McDonald of the Welsh Assembly Government's Department for Children, Education, Lifelong Learning and Skills.

which ESS vacancy data could be published were the four regions used in the Wales Spatial Plan: North Wales, Mid Wales, South East Wales and South West Wales. Finally, Scottish data was obtained for every Local Enterprise Company (LEC) except SE Grampian (where again results were suppressed because they were deemed unreliable). The second obvious limitation is that opting for most recent point in time reduced but did not eliminate the problem of comparability. As such, local comparisons between vacancies and Job Seeker's Allowance claimants and observations about hard-to-fill vacancies are made *within* England, Scotland and Wales, and not between the countries (see Chapter 4).

3.7.7 Administrative data sources

The thesis also drew on three main sources of administrative data: benefits statistics, notified vacancies to the Job Centres and the National Health Service Central Register (NHSCR). As with the surveys discussed above, both have their peculiar advantages and weaknesses. Beginning with benefits data, these are produced on a regular (at least annual) basis. With care, long runs of data can be constructed to scrutinise the general state of the labour market between Censuses[18]. This approach has, for example, allowed researchers to identify the period of rapid growth on the Incapacity Benefits caseload between the late 1980s and early 1990s (Anyadike-Danes and McVicar, 2008). Since 1999, when a 100% sample of key working-age benefits was published through the Work and Pensions Longitudinal Study (WPLS), benefits data has also permitted analysis of labour market and population health issues at a very small area (Norman and Bambra, 2007).

Using benefits data also has a number of limitations. Temporal differences in the benefits caseload might be driven by new entitlement rules, rather than real change in social and economic conditions. Such issues have been discussed at length for unemployment benefits (see Gregg, 1994) but may also be relevant for IB. Spatial variation in caseloads and outcomes might reflect local attitudes towards benefits take-up (for instance, lower take-up in rural areas) and distinct approaches to client management in different benefit offices, even

[18] Bespoke benefits data was supplied by Gary Gifford and Alan Deighton at the Department of Work and Pensions.

within a national framework. The value and duration of benefits, complexity of the benefits system and claimants' familiarity with it, the opportunity cost involved in claiming, and social stigma, may also play a role (Hernanz, Malherbet and Pellizzari, 2004). More specific to this thesis are issues of geography: prior to the mid-1990s, data on Incapacity Benefits claimants was unavailable at a level below Government Office Region (GOR). In part, this is because figures were based on a 1% sample of claimants between 1981 and 1994 and a 5% sample between 1995 and 1999. The local dimension is therefore obscured by reliance on benefits data alone.

The next source of administrative data used was the National Health Service Central Register (NHSCR). Extremely comprehensive and geographically complete, the NHSCR was used to estimate net migration flow between the counties of England and Wales over the period 1981-2001. The NNHSCR records moves in- and out- of areas (until 1998, at Family Health Service Area level, which fortunately were near-coincident with the boundaries of English and Welsh regions) by measuring registrations and de-registrations with General Practitioners.

In general, the NHSCR may not present a wholly accurate picture of migration due to the lag between people moving and registering with a GP (and indeed, failing to de-register with their old GP); moves that are not accompanied by a GP; and multiple moves within the same year by one individual within a health authority, which are likely to be double-counted. Reliance on GP registration also means that the extent of migration among certain groups, especially young males aged 16-34 and the disadvantaged, will go unrecorded. Such limitations mean that the NHSCR can at best provide a good guide to migration, but it is worth noting that *"there is no one other available source that has as good coverage and quality as the NHS administrative data"* (ONS, 2008).

Specific limitations of the NHSCR to this thesis relate to the age-bands used, a switch in geographies in 1999 affecting data in three counties (South Glamorgan, Lancashire and Cleveland) and a lack of Scottish data. The inclusion of 15-year olds in the NHSCR data will also understate the area demographic change that can be attributed to 'natural change'

(ageing and premature mortality). For South Glamorgan, Lancashire and Cleveland, estimates of migration were used for the period 1999-2001 by rolling forward the average annual migration in these areas for the years 1991-1998. As regards Scottish data, the General Register Office for Scotland (GROS) advised that it was not possible to provide data in the same format for the Scottish regions as for the English and Welsh counties.

3.8 Summary

This chapter has set out the methods used to explore SREI in Britain across time, place and individual characteristic. Quantitative methods are used in preference to qualitative methods because of their ability to measure, generalise and test hypotheses. A number of challenges are identified and a research strategy is elaborated to respond to these. Data triangulation is identified as a means to address problems of measurement bias and to permit a degree of replication. Theoretical triangulation is used to derive an extensive set of set of propositions and to test the ability of factors to sustain these, favouring a strategy of 'completeness'. Lastly, multivariate analysis is identified as a method to test the relative importance of different factors simultaneously. The chapter also deals with a larger number of technical issues relating to data sources, definitions and specific methods.

Chapter 4 Sickness-related economic inactivity in the British counties

4.1 Introduction

4.1.1 Background

Geography mattered in the growth of sickness-related economic inactivity in Britain – and matters still. It was those places whose local economies were built on coal, ships and steel where the problem manifested most acutely (McCormick, 2000): counties where a constellation of weak labour market demand, poor health and low skills remain central to understanding the issue. This chapter will illustrate this by describing the 'place' dimension of working-age sickness-related economic inactivity over time in Britain, though some consideration is also given to 'people' aspects. The chapter will respond to three key questions:

- How did sickness-related economic inactivity (SREI) change over time in the British counties and economic 'clusters' of counties?
- What factors were associated with local variation in SREI across geographies?
- Did these associated factors change over time?

Throughout, the term sickness-related economic inactivity (SREI) is used as shorthand for *all working-age people (aged 16-59/64) not currently looking for or available for work, whose status is attributed (either by themselves or others) to sickness or disability*. This includes those who described themselves as permanently sick and disabled in the Census, those claiming Incapacity Benefits and those who reported that they were economically inactive, long-term sick/disabled in the Labour Force Survey.

4.1.2 Methods and data sources used

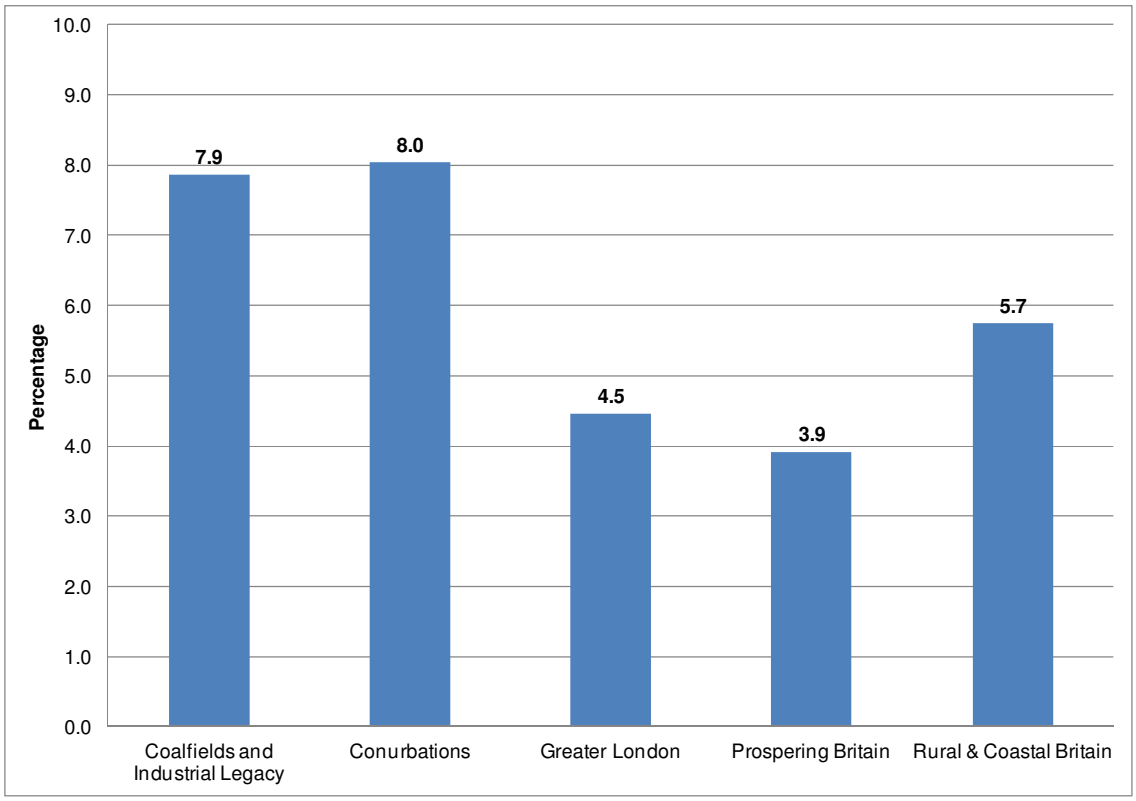
Borrowing a phrase from the literature, the methods at this stage are *"unashamedly exploratory"* (Owen, Gillespie and Coombes, 1984). A range of data sources, including the Census of Population, Labour Force Survey and administrative statistics, are triangulated to explore the subject across 64 counties and five economic clusters of Britain, between 1981

and 2006. The chapter first reviews the national and local scale of sickness-related economic inactivity and its evolution over time in Britain. Although there is strong evidence of a North-South divide, discussing counties purely in terms of their region may not capture the nuanced picture outside of the South and East of England. In particular, the continued urban-rural shift of population and employment away from cities and towards suburban and rural areas of the 1980s, the distinctive trajectories of coalfield areas and the re-emergence of cities as drivers of economic growth (Fothergill and Gudgin, 1982; Gordon, 2005; Gore et al, 2007) might be obscured by a regional focus. Clustering counties by their recent historic economic function provides a more nuanced view. The method used to cluster the 64 counties is described in more detail in Chapter 3, but here it is enough to note that five clusters were identified: Greater London; the Conurbations; the Coalfields and Industrial Legacy Counties; Prospering Britain; and Rural and Coastal Britain. After this, a variety of small area data is surveyed to try and account for these trends. The chapter also considers whether the reasons for local variation in sickness-related economic inactivity changed over time, separately for men and women.

4.1.3 Local variation and trends through time: 1981-2001

According to Census definitions, SREI affected 2.02 million working-age British adults in 2001: more than one in twenty (5.7%) of this age group. The national figure conceals differences at the sub-national level, with rates in the Conurbations and Coalfield & Industrial Legacy Areas more than twice those seen in Prospering Britain. Rural & Coastal Britain occupies a middle position, while rates seen in Greater London are closer to those in Prospering Britain than the other heavily urbanised areas (*Figure 4.1*).

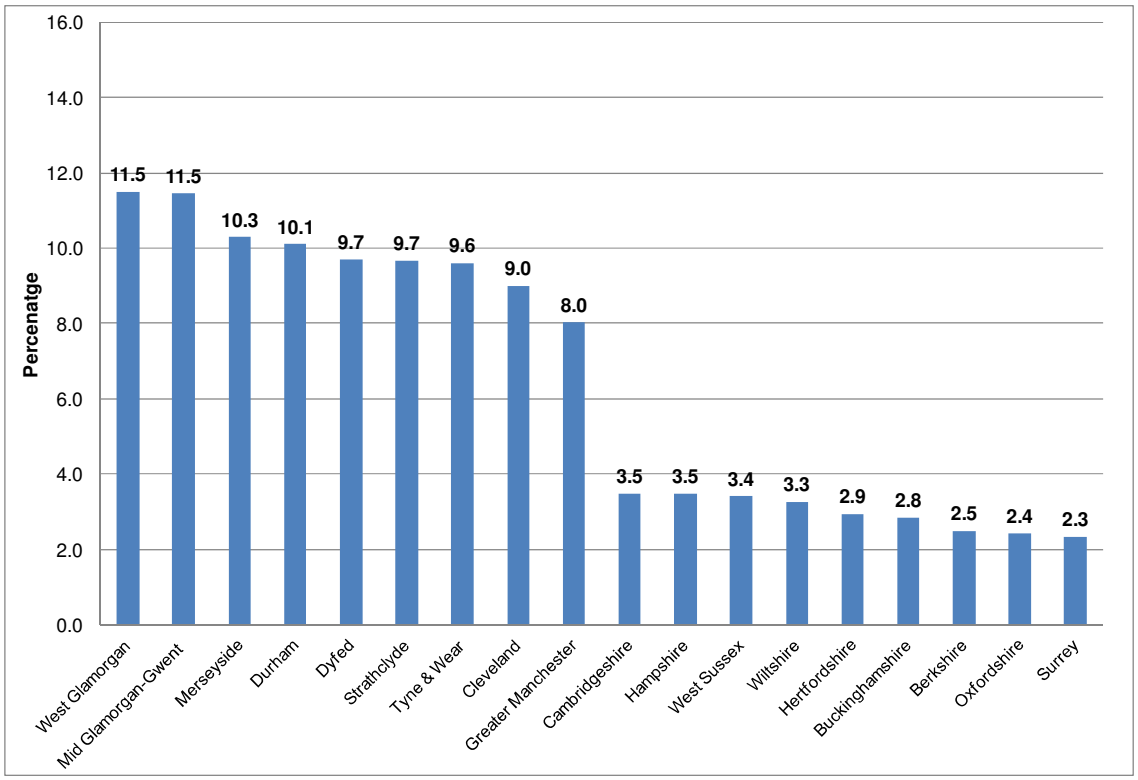
Figure 4.1: Sickness-related economic inactivity rates: economic cluster, Census Day 2001



Source: Census of Population 2001.

Spatial variation in working-age sickness-related economic inactivity (SREI) was even starker at the county level. Figure 4.2 compares eighteen counties with the highest and lowest percentage of SREI defined as having rates more than one standard deviation above or below the British average. Counties with especially high rates include four of the major Conurbations (Merseyside, Strathclyde, Tyne and Wear and Greater Manchester) while the remainder, including Dyfed in North Wales, have a strong industrial or coalmining heritage. West Glamorgan and Mid Glamorgan-Gwent, which straddle the former coalmining Valleys of South Wales, have the very highest rates of sickness-related economic inactivity: more than 10% of the working-age population. At the opposite end of the spectrum, in the Shire counties of Southern and Eastern England, 3.5% or fewer of the working-age population were permanently sick and disabled.

Figure 4.2: Counties with the highest and lowest SREI rates: Census Day 2001



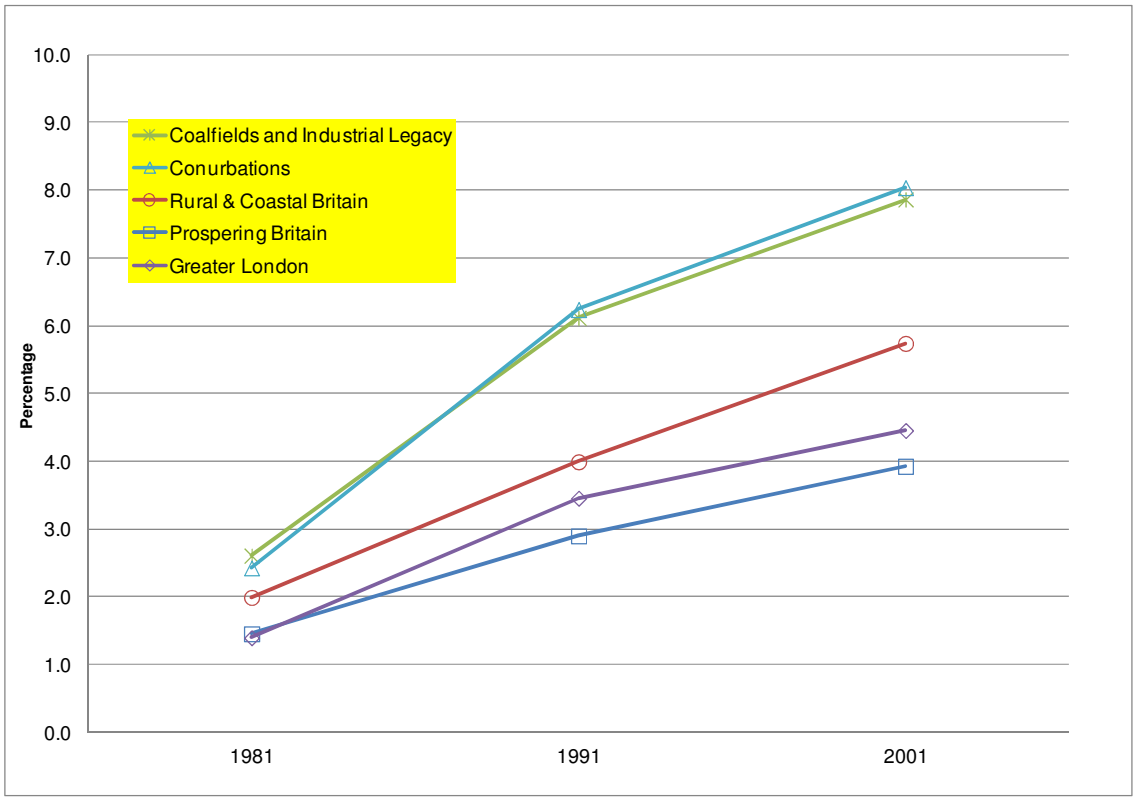
Source: Census of Population 2001.

This strong spatial dimension to SREI, and indeed worklessness in general, is a lesson familiar from the literature (Beatty et al, 2009b; Beatty and Fothergill, 2003; Webster, 2000). SREI also rose over time. Using Census definitions, the number of people affected increased by 1.4 million between 1981 and 2001. Again, this upward trend in SREI in Britain is consistent with the literature (McVicar, 2008; Davis and MacKay, 2008). What is less known is how this phenomenon evolved through time at a local level (although Beatty et al (2007) have used similar data to produce estimates of hidden unemployment). To explore this, working-age sickness-related economic inactivity rates for 1981, 1991 and 2001 were therefore calculated for the five economic clusters and 64 British counties (see Appendix 2 for county-level results).

This data can be interpreted in multiple ways. One approach is to compare temporal trends in sickness-related economic inactivity in the five economic clusters (*Figure 4.3*). Although SREI steadily increased in all five clustered areas over time, the rate of increase was more

marked for the Coalfields and Industrial Legacy areas and Conurbations in both decades, causing the gap in SREI to widen between these types of counties and other parts of Britain, especially more affluent areas.

Figure 4.3: Working-age SREI rate: economic clusters, 1981-2001

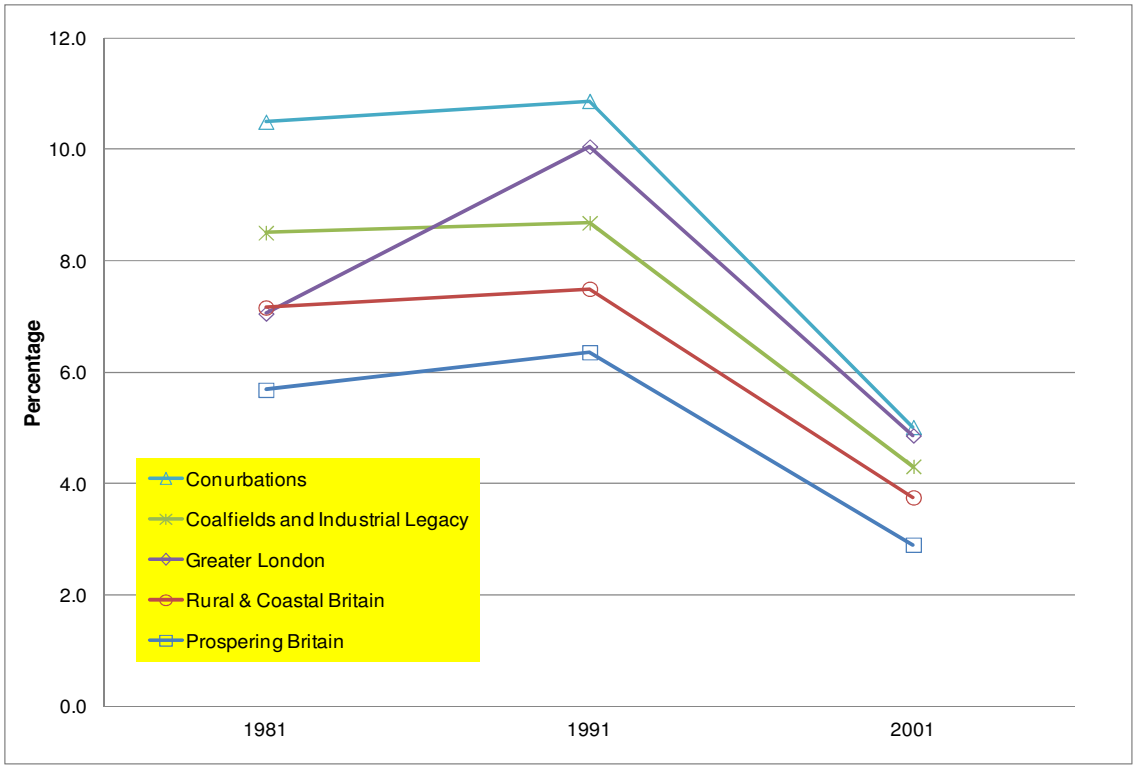


Source: 1981-2001 Census of Population

By way of comparison, working-age unemployment trends can also be presented for the five economic clusters for the three points in time (*Figure 4.4*). The pattern differs in some respects. Between 1981 and 1991, Census unemployment rates either remained static or rose (succeeding a period of steeply rising unemployment in the previous decade). During the 1990s, unemployment rates fell in all five clusters and there were signs of convergence in absolute terms. For example, in 1981 unemployment rates in the Conurbations were 4.8 percentage points higher than in Prospering Britain, whereas this gap had shrunk to 2.1 percentage points by 2001.

Relative convergence in employment opportunities should not be overstated, though. The Conurbations had consistently higher unemployment rates relative to the other areas in 1981 and 1991, and shared Greater London's higher rates in 2001. Prospering and Rural and Coastal Britain had consistently lower levels of unemployment in all three time periods. Greater London stands as having a more distinctive pattern of unemployment change across the twenty year time span. In the 1980s, unemployment rates in the Capital increased by a third (6.9% to 9.8%). The Capital also moved from having the second lowest rate of unemployment of the five clusters in 1981 to having the second highest. The spatial divide in Britain was still pronounced at the turn of the 21st century (Webster, 2000; Fothergill, 2001). Indeed, as shown above, if sickness-related economic inactivity is also taken in account, this polarisation may have actually widened over time.

Figure 4.4: Working-age unemployment rate: economic clusters, 1981-2001

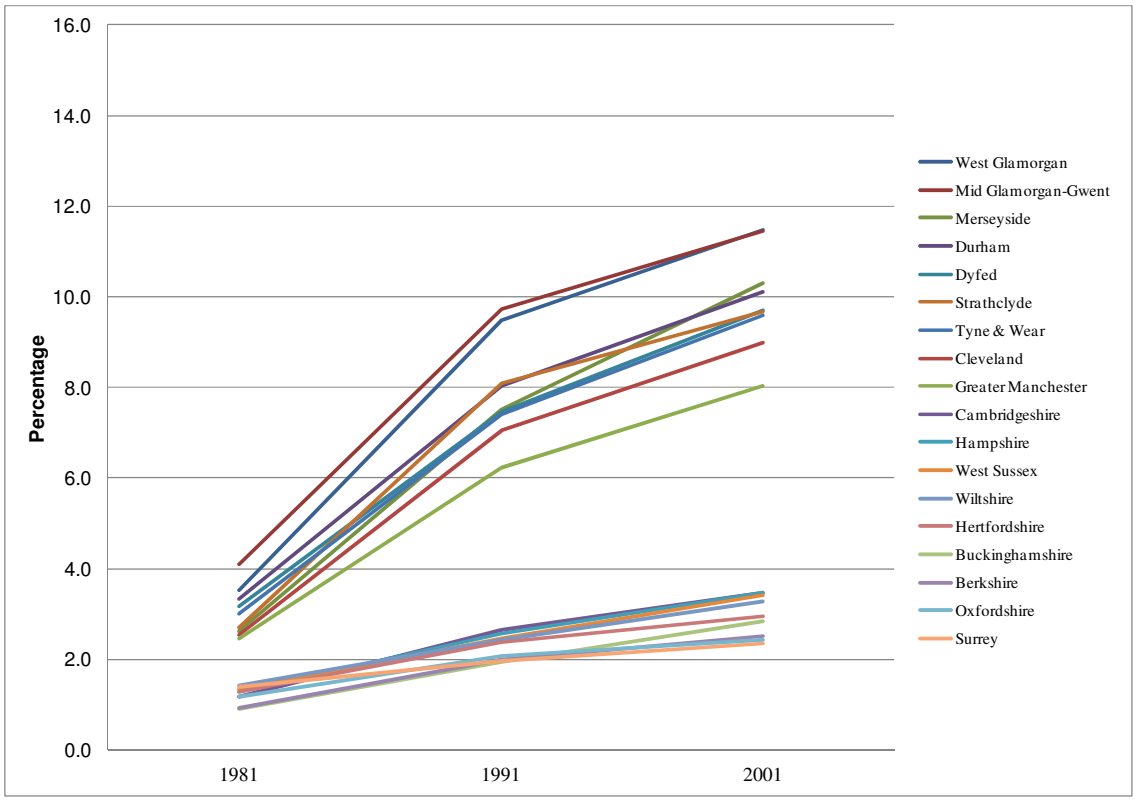


Source: 1981-2001 Census of Population

This is underscored if time trends in sickness-related economic inactivity for the eighteen counties introduced previously are analysed (*Figure 4.5*). Again, immediately apparent is the divergence in SREI rates between Conurbation and Coalfield counties and the more affluent

Shire counties. By way of illustration, at the start of the period, rates of working-age permanent sickness/disability in Strathclyde region were around twice as high as those seen in Surrey (2.7% vs. 1.4%). Twenty years later, rates in the Strathclyde region were *four times* those in Surrey, with the gap in prevalence widening to 7.3%. Much steeper increases in the 1980s suggest the forces at work driving increases in sickness-related economic inactivity were rather stronger in this decade. The chart also shows the diversity in trends among high rate counties: Greater Manchester and Merseyside had almost identical rates of working-age sickness-related economic inactivity in 1981, but by 2001, rates on Merseyside were more than 2 percentage points higher.

Figure 4.5: Trends in SREI rates, selected British counties: 1981, 1991 and 2001

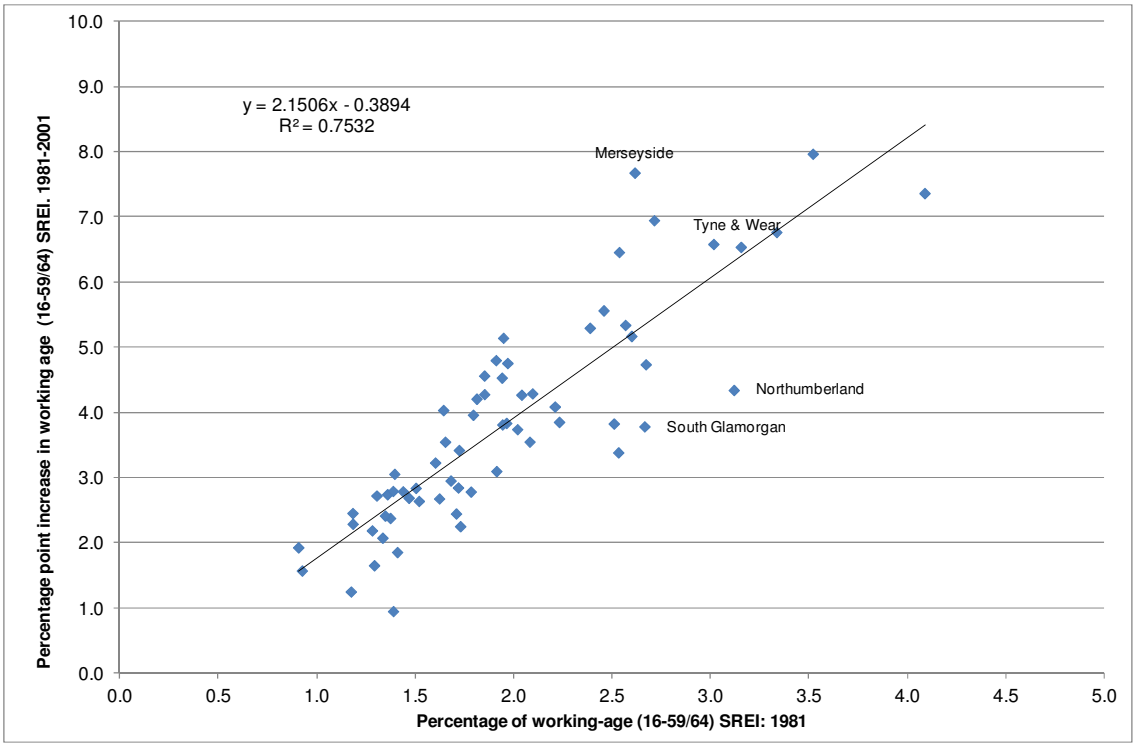


Source: 1981-2001 Census of Population

It is true that counties' starting points also mattered. Simple linear regression suggests there was a strong correlation (R square=0.75) between county-level prevalence of permanent sickness/disability in 1981 and their percentage point increase between 1981 and 2001 (*Figure 4.6*). However, although rates of sickness-related economic inactivity rose everywhere in Britain between 1981 and 2001, the relative increase was much steeper than

might be predicted in some counties (Merseyside, Tyne and Wear) and lower than might be expected in other places (Northumberland, South Glamorgan). This suggests that it was not just a combination of pre-existing local factors and national trends that drove these increases, but also changes that impacted at a local level in the 1980s and 1990s.

Figure 4.6: Association between working-age permanent sickness and disability in 1981 and 2001: all British counties



Source: 1981-2001 Census of Population

Describing these changes in sickness-related economic inactivity at a local level provides a fresh way of considering the issue, but does not, by itself, provide a comprehensive answer as to why these changes occurred. As described in the literature review (see Chapter 2), labour market demand, the benefits system, employability and health may all be contributory factors associated with SREI. In the sections that follow, data is triangulated from a range of sources to critically examine the main explanations for the growth of this phenomenon across space and time in Britain.

4.2 Explanation I: Local labour market demand

It has been estimated up to one million of those affected by sickness-related economic inactivity (SREI) might be considered 'hidden unemployed' – and if local demand were stronger, might be re-engaged in the labour force (Beatty and Fothergill, 2005; Beatty et al, 2009b). However, the official view has consistently maintained that the phenomenon of SREI did not reflect a lack of jobs. Instead the implication was that the challenges were about building employability and promoting job search: *"the core of our radical new approach will be to move people from being passive recipients of benefits to active jobseekers...the opportunities to work are there"* (DWP, 2007:4, 91). This section will scrutinise this assumption of plentiful job opportunities everywhere, using two measures of local labour market, 'jobs density' and the 'Beveridge ratio', and their relevance to SREI.

4.2.1 The jobs density ratio, 1981-2001

Originally developed by the Office of National Statistics (ONS), the jobs density is calculated by dividing the total number of filled jobs in a particular geography by the number of working-age residents who live in that area. The resultant ratio gives an indication as to the strength of labour market demand at a point in time (Hastings, 2003). For instance, a job density of 1.0 would mean that there was (potentially) one job for every working-age person living in that area: this would be a very job-rich area, since some working-age people are always economically inactive by choice or constraint (e.g. the early retired, those looking after home and family, students without the need/desire for a job etc.).

Jobs density is not an appropriate indicator of labour market demand for small areas and especially not for cities in isolation. Although this approach has been used in the past to argue that worklessness in the British cities does not reflect deficient demand, analysis at this level is flawed because it fails to take account of commuter flows (Beatty and Fothergill, 2005). Using larger spatial units, for instance counties, reduces this problem, though not completely. Greater London in particular is especially open to in-commuting from the surrounding counties (Gordon, 2005). As such its true jobs density is rather lower than

described here, since the population competing for these jobs is not contained simply within the boundaries of Outer London.

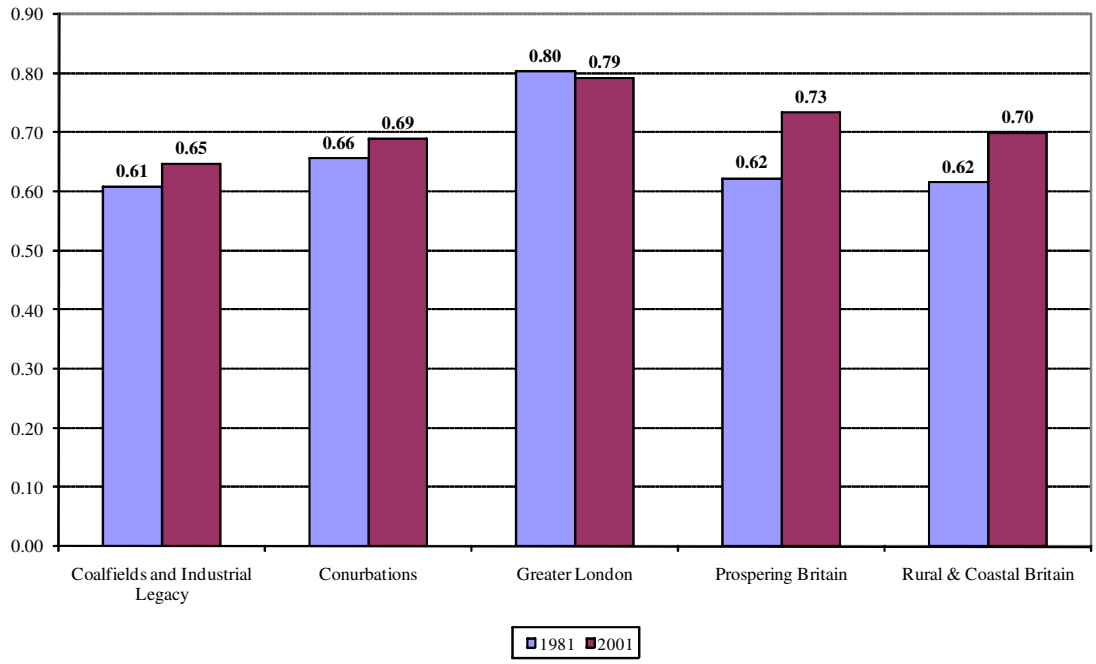
Like the ONS measure, the jobs density ratio used here treats all jobs as equal, regardless of whether they are full-time or part-time and thus disguising long-term growth in part-time working in Britain. But there is also an important difference. Census workplace employment statistics will produce lower 'jobs density' ratios compared to ONS figures for the same geographies. Most of the discrepancy comes from the Annual Business Inquiry (ABI) used to generate estimates of workplace employment for the ONS measure.[19] As an employer survey, the ABI counts one person 'double jobbing' as two jobs, whereas the Census would record the person's main workplace job only (Cole, Frost and Thomas, 2002: 272). This gap is quite substantial, since around 10% of workers in Britain hold a second job (Böheim and Taylor, 2004). The 2001 Census measure of workplace employment will also include those in government training (who would have been counted as unemployed in 1991), inflating the jobs density measure for this year.

Jobs density ratios for the five economic clusters in 2001 suggest real differences in labour market demand (*Figure 4.7*). Greater London stands as having a very high 'job density' compared to the other clusters, though it is likely to be skewed by the issues described above. Prospering Britain also has a relatively high 'jobs density' while the Coalfields and Industrial Legacy areas have much weaker labour market demand according to this measure. 'Job densities' for the Conurbations and Rural & Coastal Britain are somewhere in between. The relative strength of labour market demand in the clustered also altered over time. Greater London saw its jobs density decrease slightly between 1981 and 2001, caused by a working-age population that grew faster than the jobs base. The other four clusters saw their 'jobs densities' increase over time, though the pace of change was weaker in the Coalfields and Industrial Legacy areas and Conurbations compared with Rural & Coastal Britain and particularly Prospering Britain. Indeed, the Conurbations shifted from having the second

[19] ONS figures are derived from three sources: an Employers Survey (the Annual Business Inquiry); estimates of the self-employed from the Labour Force Survey (LFS); and data on HM armed forces, plus those on government schemes, also from the LFS.

highest 'jobs density' of the five areas shown (0.66) in 1981 to second lowest (0.69) in 2001. Even in a period of sustained national growth, the resurgent cities still had to compete hard to grow their employment base.

Figure 4.7: Jobs Density: economic cluster, Census Day 1981 and 2001



Sources: 1981 and 2001 Censuses of Population.

Broad differences in the pace of employment growth were accompanied by qualitative changes in demand for labour. Table 4.1 shows how the contribution to net employment change in the five clusters was constituted. While part-time employment, especially for women, increased everywhere, there was a sharp divide in full-time job creation for men. Between them, the Conurbations and Coalfield & Industrial Legacy areas lost more than 580,000 full-time jobs for men between 1981 and 2001, while Prospering Britain gained 628,000. The table also shows that creation of full-time employment was divided almost evenly between the genders in Prospering Britain, but in the Industrial Legacy areas and the Conurbations the creation of full-time employment was exclusively concentrated among women and failed to offset the losses among men. Deindustrialisation (especially for Conurbations with a range of other indicators of labour market disadvantage) may have exaggerated these trends.

Table 4.1: Change in full and part-time employment, by gender and clustered area: 1981-2001

	Male		Female		
	Full-time	**Part-time**	**Full-time**	**Part-time**	**TOTAL**
Coalfields and Industrial Legacy	-145,457	144,822	66,159	239,440	304,964
Conurbations	-439,232	237,056	88,524	268,888	155,236
Greater London	-89,011	163,905	209,156	125,047	409,097
Prospering Britain	628,644	402,610	645,085	729,654	2,405,993
Rural & Coastal Britain	114,233	167,537	203,979	359,867	845,616

Sources: 1981-2001 Census Special Workplace Statistics.

Adjustment in labour market demand, then, appears to be more relevant when considering changes in sickness-related economic inactivity in the Conurbations and Coalfields & Industrial Legacy clusters. Since the jobs density measure is derived from filled jobs, it could be argued that is useful as an indicator of general demand but less so in capturing unmet demand for workers. For this, the 'Beveridge ratio' may prove more informative.

4.2.2 Introducing the Beveridge ratio

Writing in 1944, William Beveridge defined full employment as a situation where there are *"always more vacant jobs than unemployed men (sic), not slightly fewer jobs…the labour market should always be a seller's market rather than a buyer's market"* (Beveridge, 1944:18-19). In Britain, this ratio (of registered unemployment to notified vacancies, U: V) was one of the earliest tools used to measure demand for labour and latterly became known as the 'Beveridge ratio'. Where the ratio exceeds 1.0 there is a surplus of registered unemployed over vacancies; where it is less than 1.0 there is a surplus of job vacancies over people registered as unemployed. Establishing robust, local measures of the U: V measures can help provide insights into the scale of variation in local demand.

There are two measures of vacancies in Britain: administrative data, drawn from the Job Centre Plus (JCP) records, and employer surveys. JCP published data does not provide a complete picture of the total number of vacancies available at a point in time, because some employers prefer to recruit though alternative means. As noted by Bunt et al (2007), the JCP captures only about 37% of the market 'share' of vacancies, a figure that also varies between regions. Comparison of JCP vacancies to survey estimates confirms this: Greater London, for example, has the lowest ratio (0.37) of any British region (see Appendix 3). To reduce distortions in the picture of local labour market demand, employer surveys were used as the source for vacancy data. The measure of unemployment chosen was the claimant count: simply put, the total number of working-age people recorded as claiming Job Seeker's Allowance (JSA) at a fixed point in time.

Vacancies were unfortunately not available at county or (except for Scotland) local authority level: as a result, the U: V ratios reflect the boundaries for Scottish Regional Operational Areas (ROAs), English Learning and Skills Councils (LSCs) and Welsh Spatial Plan Areas. Results are shown for geographies within Scotland, Wales and England separately because the timing of the employer surveys varied between these countries.

Beginning with Scotland, the U:V ratio is shown for six Regional Operational Areas (ROAs) in summer 2006 (*Table 4.2*). The U:V ratio is especially high in West Central Scotland (1.66) and high in East and Central Scotland (1.29) and the South of Scotland (1.20), indicating significant surpluses of Job Seekers over vacancies in these three areas. In the Highlands and Islands and in Grampian (where the Beveridge ratio falls below 1.0) labour market demand is likely to be stronger. In the Central Belt, the inclusion of Fife and Forth Valley in the East Central Scotland ROA may present a slightly misleading picture. High ratios in these areas (2.25 and 1.63 respectively) must be considered alongside a low ratio (0.93) in Lothian and Edinburgh.

For Wales data from spring 2005 was analysed for the four geographic units identified in the Wales Spatial Plan (*Table 4.3*). The highest U:V ratio – indicating demand – was seen in South East Wales (1.46), whose boundaries include many unitary authorities within the orbit of the South Wales Coalfields. Even this ratio is likely to understate the scale of the challenge in places such as Blaenau Gwent or Merthyr Tydfil, since the SE Wales vacancies include data from the city of Cardiff and the Vale of Glamorgan. By contrast, rural Mid Wales and the more mixed South West Wales (which does, however, include the industrial city of Swansea) have an excess of vacancies over people claiming JSA. Largely rural North Wales has a keenly balanced U:V ratio, so that in theory its vacancies and Job Seekers are numerically matched.

In England, the general pattern is of low U:V ratios in the South and East – with some exceptions (see Kent and Medway or Suffolk) – and high U:V ratios in the North and North-West. Seven English LSC areas (North and East London, Merseyside, Humberside, Tees Valley, Birmingham and Solihull and the Black County) have a U:V ratio in excess of 2.0. Milton Keynes, Oxfordshire and Buckinghamshire, Berkshire and Surrey have very low U:V ratios (*Table 4.4*).

Table 4.2: Ratio of JSA claimants to Vacancies, Scottish Regional Operational Areas: June-July 2006

Regional Operational Areas	Regions and localities included	JSA	Vacancies	U: V Ratio
West Central Scotland	Strathclyde excluding Argyll & Bute	47,001	28,300	1.66
East and Central Scotland	Lothian; Fife; Central	24,082	18,700	1.29
South of Scotland	Borders; Dumfries and Galloway	3,348	2,800	1.20
Tayside	Tayside	7,274	7,300	1.00
Highlands and Islands	Highland; Shetlands; Orkneys; Western Isles including Argyll & Bute	5,778	7,200	0.80
Grampian	Grampian	3,616	12,400	0.29

Source: Future Skills Scotland key indicators (Employer Skill Survey); average JSA claimant count, June-July 2005

Table 4.3: Ratio of JSA claimants to Vacancies, Welsh Spatial Plan Areas: March-May 2005

Spatial Plan Area	Regions and localities included	JSA	Vacancies	U: V Ratio
South East Wales	Mid-Glamorgan-Gwent; South Glamorgan	22,033	15,119	1.46
North Wales	Clywd-Gwynedd	8,407	8,265	1.02
South West Wales	West Glamorgan plus Carmarthenshire and Pembrokeshire	9,084	10,588	0.85
Mid Wales	Powys plus Ceredigion	1,766	3,904	0.45

Source: Future Skills Wales (FSW) 2005 Sector Skills Survey; Welsh Assembly Government - DCELLS; average JSA claimant count, March-May 2005

Table 4.4: Ratio of JSA claimants to Vacancies, English LLSCs: May-August 2005

Local Learning and Skills Council	JSA	Vacancies	U: V Ratio
London North	25,391	8,214	3.09
The Black Country	26,146	9,060	2.89
Greater Merseyside	33,340	11,787	2.83
London East	50,550	20,465	2.47
Tees Valley	13,674	6,082	2.25
Birmingham and Solihull	35,838	17,001	2.11
Humberside	17,619	8,346	2.11
County Durham	6,480	3,325	1.95
London West	27,643	15,074	1.83
Tyne and Wear	21,303	11,695	1.82
Derbyshire	12,367	8,187	1.51
Northumberland	4,320	2,857	1.51
London South	18,819	13,039	1.44
Leicestershire	13,422	9,714	1.38
Kent and Medway	18,665	14,188	1.32
Nottinghamshire	14,553	11,169	1.30
South Yorkshire	19,709	16,246	1.21
Northamptonshire	7,226	6,033	1.20
Lincolnshire and Rutland	6,761	5,693	1.19
Suffolk	7,087	6,040	1.17
West Yorkshire	32,972	28,102	1.17
London Central	41,817	36,126	1.16
Cumbria	5,572	5,027	1.11
Greater Manchester	38,920	35,392	1.10
Essex	17,051	15,760	1.08
Coventry and Warwickshire	10,810	10,275	1.05
Lancashire	17,262	16,982	1.02
Norfolk	9,999	10,165	0.98
Staffordshire	12,141	12,433	0.98
Herefordshire and Worcestershire	8,025	8,243	0.97
Shropshire	4,060	4,176	0.97
Sussex	15,443	16,148	0.96
Cambridgeshire	7,331	8,634	0.85
Gloucestershire	5,220	6,106	0.85
Devon and Cornwall	14,926	19,612	0.76
Hertfordshire	9,276	12,221	0.76
Hampshire and the Isle of Wight	14,718	20,594	0.71
Somerset	3,402	4,920	0.69
Wiltshire and Swindon	4,679	6,775	0.69
Bournemouth, Dorset and Poole	4,304	6,524	0.66
Cheshire and Warrington	7,285	12,583	0.58
West of England	9,084	16,617	0.55
North Yorkshire	5,874	11,358	0.52
Milton Keynes, Oxfordshire and Buckinghamshire	10,337	22,220	0.47
Berkshire	6,372	13,785	0.46
Surrey	5,686	14,745	0.39

Source: National Employers Skills Survey 2005; average JSA claimant count, May-August 2005

While this analysis in many ways reinforces the spatial pattern seen for jobs density, it also poses a number of questions. London's position is particularly anomalous: how can it be strong in terms of filled jobs but weak in terms of vacancies? Part of the answer may reflect employers' practices. Employers in Greater London are more likely than other regions to use recruitment agencies and especially the Internet to advertise vacancies (Bunt et al, 2007). The U:V ratio may also overstate the strength of labour markets in rural and semi-rural areas. Benefits take-up tends to be lower in rural parts of Britain, so there. All things being equal, too, it would be harder for a rural Job Seeker without access to private transport to access vacancies than for the equivalent Job Seeker to cross a Conurbation (Shucksmith, 2000).

It is possible to compare these U:V ratios with the level of general demand measured by 'jobs densities' for the same geographies shown in Tables 4.2 – 4.4 in 2005/06. The job density variables use the official ONS methodology as described above, including employee jobs from the Annual Business Inquiry, self-employment figures from the Labour Force Survey and HM forces in the count of jobs. The initial association between general demand and the U:V ratios is a weak one (*Figure 4.8*). However, it is apparent that the London LSCs remain outliers, alongside Greater Merseyside, Birmingham and Solihull and the Black County (with the latter three LSCs having a higher than expected proportion of working-age people without qualifications). Once these outliers are removed, the association between the job densities and U:V ratios becomes much stronger (*Figure 4.9*). For example, local labour markets in North East England, West Central Scotland and South East Wales have high U:V ratios and lower 'jobs densities'. At the other extreme, local labour markets such as Berkshire, Milton Keynes, Oxfordshire and Buckinghamshire, Surrey and Mid-Wales exhibit signs of strong unmet demand. Together with the jobs densities data, these local 'Beveridge ratios' undermine the official view that unmet demand for labour is strong across the whole of Britain.

Figure 4.8: Comparing Jobs Densities and Local Beveridge Ratios, 2005/06

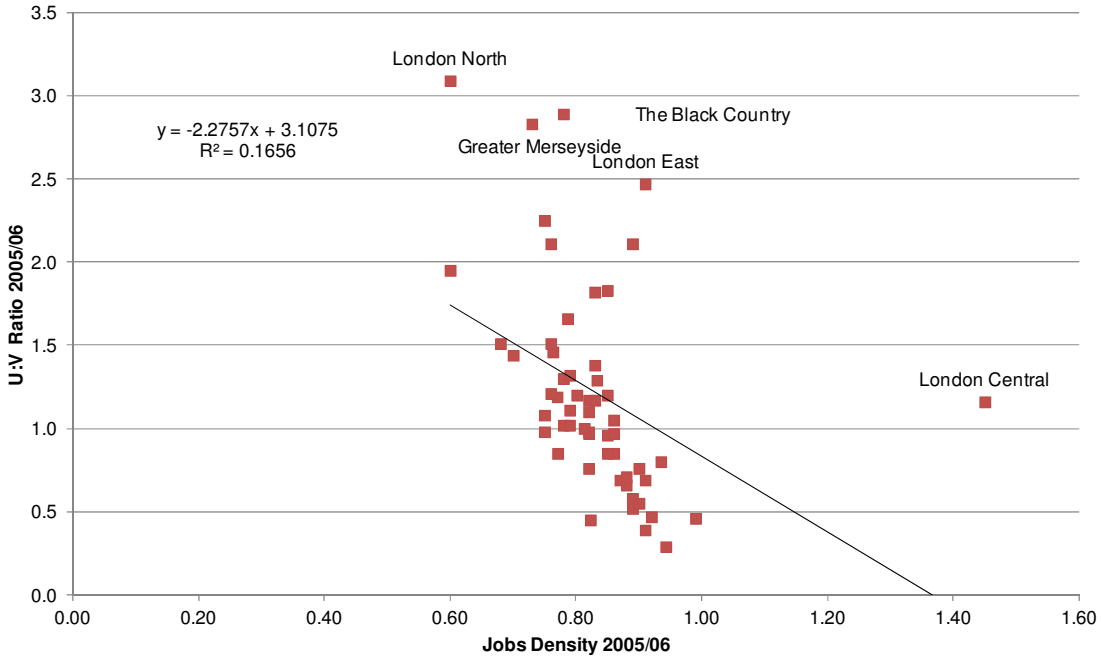
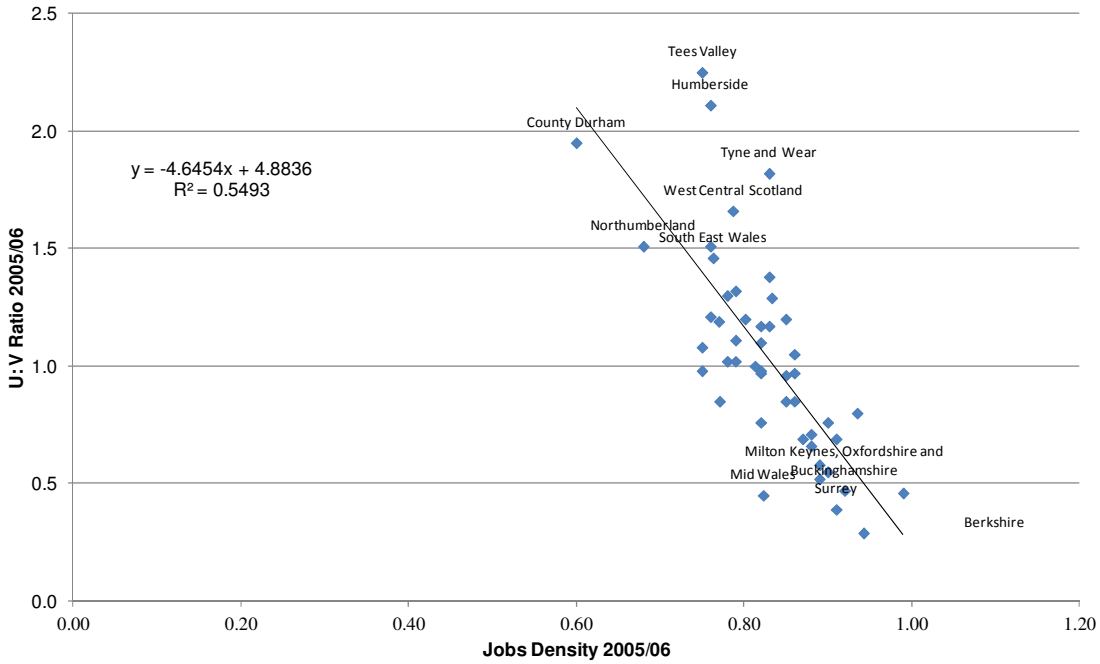


Figure 4.9: Comparing 2001 Jobs Densities and 2005/06 Local Beveridge Ratios, excluding London LSCs, Birmingham & Solihull, the Black County and Greater Merseyside



Source: ONS; Tables 4.2 – 4.4.

4.2.3 Local labour market demand and SREI through time

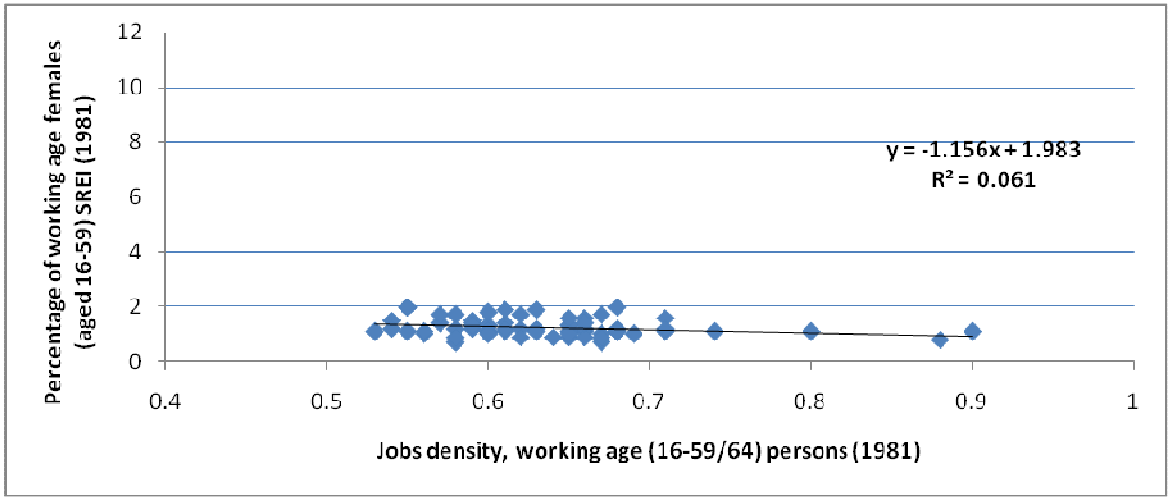
The analysis above broadly supports the idea of an association between labour market performance and rising sickness-related economic inactivity, with the Conurbations and Coalfields and Industrial Legacy areas having more problematic adjustment in both demand and supply than Prospering and Rural and Coastal Britain. If the official DWP/Treasury view that demand deficiency was not a problem (at least prior to 2007) is correct, then it might be expected that either no association is found between jobs density and working-age SREI or that the association in 2001 is weak compared to previous years.

Using simple linear regression, it is possible to quantify the strength of the association between our explanatory variable (jobs density) and the dependent variable (SREI). The analysis can be shown for all three Census years and for men and women separately. It was decided not to split the job density measure into its male and female components, mainly because of the increasing overlap between 'male' and 'female' jobs over time in Britain, driven partly by social change but also due to the decline of heavy industry and growth of the service sector (Beatty et al, 2008).

For men (*Figure 4.10*) in 1981 jobs density was significantly and negatively associated (t=-2.1, p=0.04) with sickness-related economic inactivity (SREI), though the explanatory power was very small (R squared=0.07). By 1991, the value of jobs density as an explanatory variable for sickness-related economic inactivity among working-age men had increased (R squared=0.21, t=-4.1, p=0.00). By 2001, jobs density had increased further to explain half (R squared=0.48, t=-7.6, p=0.00) of the variation in male SREI across the 64 counties. Moving on to consider the situation for women (*Figure 4.11*), in 1981 jobs density was significantly but weakly associated (R square=0.06, t=-2.0, p=0.04) with variation in SREI. By 2001, the ability of labour market demand to explain differences in SREI across the counties had increased (R square=0.18, t=-3.8, p=0.04). The association between jobs density and SREI among women strengthened further by 2001 (R square=0.47, t=-7.3, p=0.00). For both sexes, then, there is some evidence that local labour market demand became more strongly associated with variation in sickness-related economic inactivity between 1981 and 2001.

Figure 4.10: Association between working-age (16-59/64) jobs density and male working-age (16-64) SREI, British counties: 1981, 1991 and 2001

Figure 4.11: Association between working-age (16-59/64) jobs density and female working-age (16-59) SREI, British counties: 1981, 1991 and 2001



4.2.4 Summary

Whether measured by the ratio of unfilled vacancies to Job Seekers or by filled jobs divided by the resident working-age population, labour market demand is distributed unevenly across Britain. There is also a tendency for places with weaker local labour market demand to have higher levels of SREI. Between 1981 and 2001, the association between SREI and local labour market demand appears to have strengthened. This may have been driven by a number of factors. In 1981, national recession meant that employment opportunities were weak everywhere. In contrast, much stronger jobs growth in Rural and Coastal Britain and (especially) Prospering Britain relative to other parts of Britain in the 1980s and 1990s contributed to a divergence in local employment opportunities by 2001. Unbalanced jobs growth between local labour markets was made more problematic by spatial differences in the types of jobs being created. While Prospering Britain succeeded in generating a fairly even number of full-time jobs for both men and women, the Conurbations saw a large net reduction in full-time male positions and a smaller increase in the number of full-time female jobs. Altogether, deficits in local labour market demand cannot be discounted as an explanation for the growth in SREI.

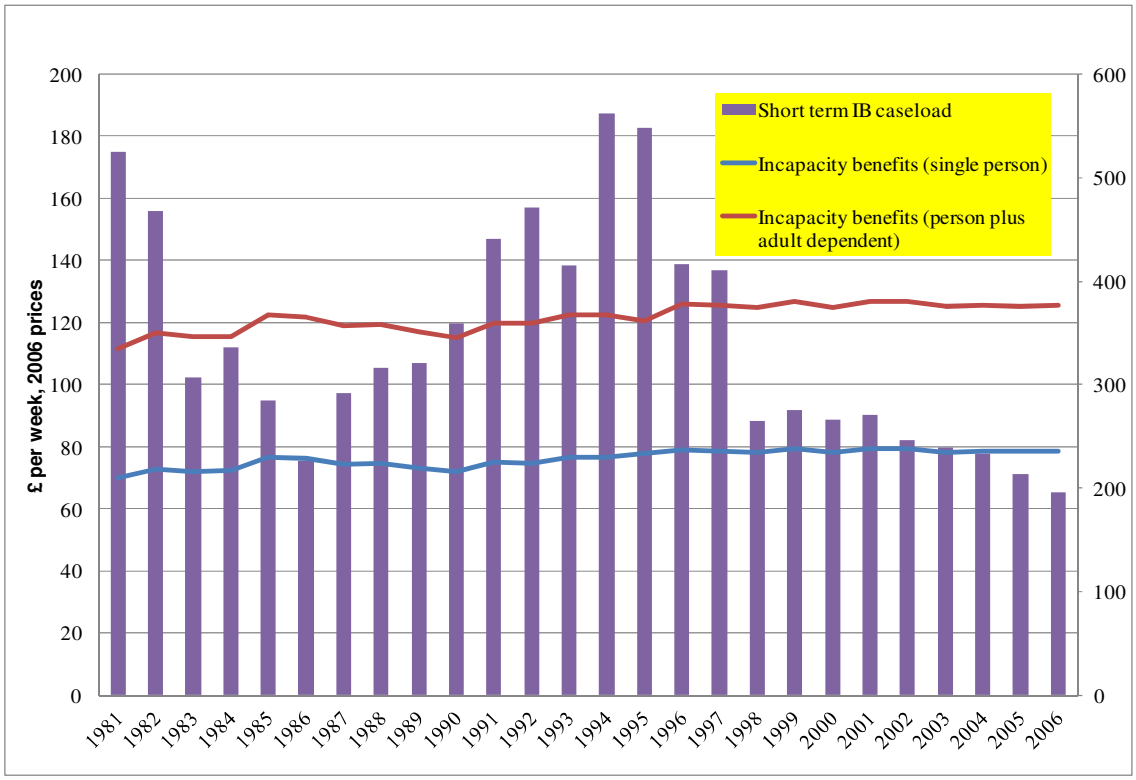
4.3 Explanation II: the Benefits System

A second set of explanations for the growth of sickness-related economic inactivity is that it is partly due to the welfare benefits system. First, the relative generosity of Incapacity Benefits compared to unemployment benefits is seen to encourage people to opt for the former. There are also 'perverse incentives' to remain on IB: after 12 months, the value of benefits receives increases, with a transition from the lower to higher rate of Incapacity Benefits. These benefits were also relatively generous compared to earnings (especially earnings for unskilled workers, at the bottom of the labour market), giving a further incentive to remain economically inactive. This generosity was reinforced, it is alleged, by the fact that IB was (until 2001) non-means tested, unlike unemployment benefits, which would have made it particularly attractive to older men in receipt of an occupational pension (Bell and Smith, 2004). Second, inadequate scrutiny created a situation of 'moral hazard'. Moral hazard occurs in insurance systems where information is distributed unevenly between those paying the benefits and those insured, thus making insurance claimants more likely to exploit the system (both unintentionally, though risky behaviour, and intentionally, through fraud). In the analysis that follows, a mix of administrative and survey data is used to weigh the evidence on each of these aspects.

4.3.1 How generous are Incapacity Benefits?

There are three ways to think about the generosity of Incapacity Benefits: their cash value adjusted for inflation ('real terms value'), their value compared to earnings ('replacement ratio') and their value compared to unemployment benefits ('disability premium'). Ideally the association between these measures and in-flows (new people starting to claim) would be tested directly. Unfortunately, time-series data on in-flows has only been made readily accessible since 1999. Instead, the short-term claimant (< 6 months) caseload is used to approximate for the level of annual in-flows. In real terms the average payment to single IB claimants in Britain increased from £69.82 per week in 1981 to £78.5 per week in 2006. For those with an adult dependent, weekly payments increased from £111.69 to £125.45 over the same period. It is clear, though, that there is no association between the real value of IB and flows onto Incapacity Benefits. For example, in the period 1987 to 1996, the real value of IB remained essentially unchanged but the short-term caseload grew strongly (*Figure 4.12*).

Figure 4.12: Real terms value of Incapacity Benefits (single adults and persons with dependents, 2006 prices) and short-term IB caseload: Great Britain, 1981-2006



Source: DWP 2006 Abstract of Statistics for Benefits, National Insurance Contributions, and Indices of Prices and Earnings.

The second way to examine the generosity of Incapacity Benefits is to consider their 'replacement ratio': the percentage of earnings being replaced by benefits payments. If replacement ratios were rising, particularly for the low-skilled, then this may partly explain growth in the IB caseload as those of working-age with health problems opted for benefits rather than labour market participation. Figure 4.13 tracks the IB replacement ratio for two hypothetical households, a single person and a couple with no children *on half average earnings, as a percentage of net income after housing costs*. There is scant evidence that increased generosity relative to earnings drove increases in-flows to IB for either type of household; except for a brief period between 1993 and 1995, replacement ratios either fluctuated without much change or fell in value. However, since earnings vary across Britain but benefits are set nationally, it is possible that replacement ratios might be higher in some places than others – a point considered in more detail in 4.3.4.

Figure 4.13: IB replacement ratio, single person and couple with no children on half average earnings after housing costs and short-term IB caseload: Great Britain, 1981-2006

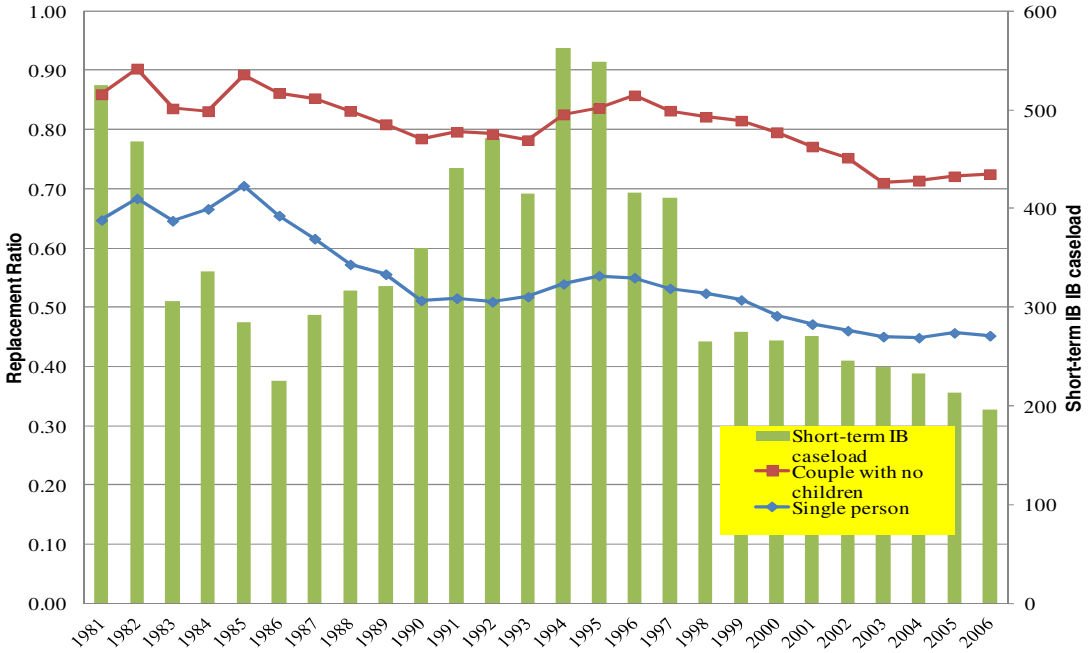
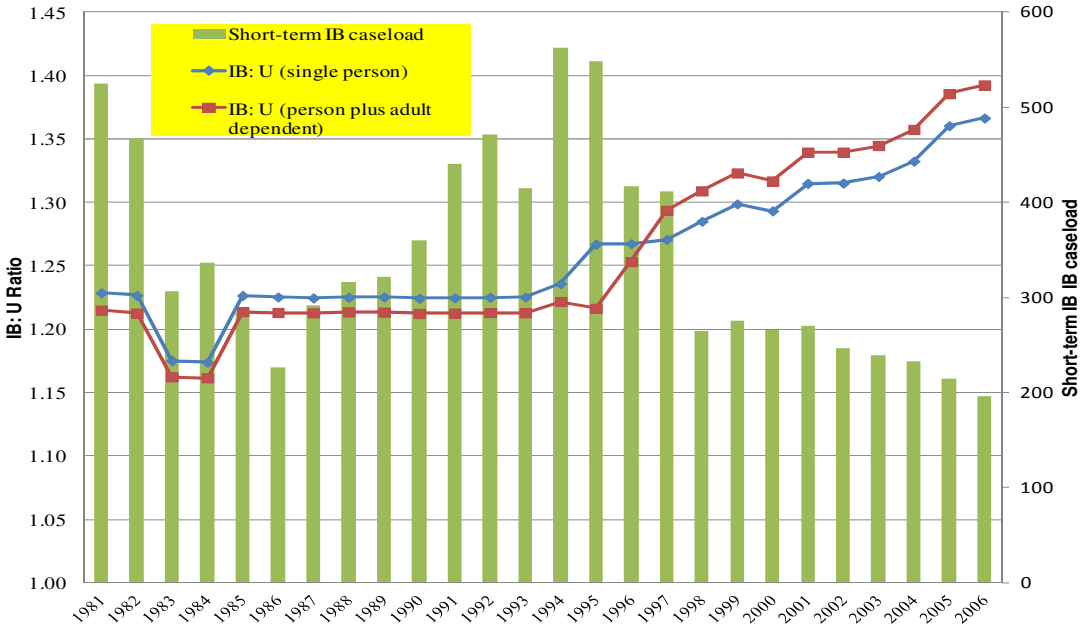


Figure 4.14: Ratio of real value of Incapacity Benefits: Unemployment Benefit (single adults and persons with dependents, 2006 prices) and total IB caseload: Great Britain, 1981-2006



Source: Social Security Statistics (Various volumes); Source: DWP 2006 Abstract of Statistics for Benefits, National Insurance Contributions, and Indices of Prices and Earnings.

A final way to describe the generosity of Incapacity Benefits is to look at their value in comparison to Unemployment Benefits (UB). Here the assumption is that, all things being equal, the non-employed would choose the more valuable benefit. Figure 4.14 expresses this as a ratio, for both single adults and persons with dependents, for Great Britain between 1981 and 2006. Over the whole 25-year period, the weekly cash value of Incapacity Benefits was between 25% and 40% more than the Unemployment Benefit equivalent. However, its relative value was flat during the period 1981-1994, spanning the phase of strong growth in the short-term IB caseload. There was a steady increase in this ratio from the mid-1990s onwards – though since in-flows were falling from this period, evidence of a clear association between caseload and relative value of benefits is missing.

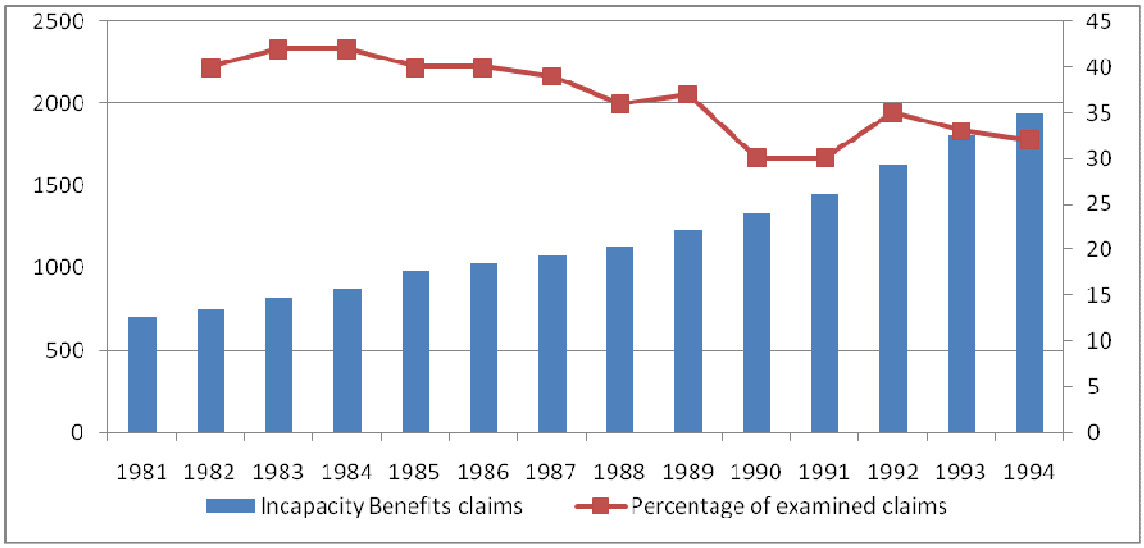
4.3.2 Moral hazard

In welfare regimes, moral hazard has previously been applied to explain swelling unemployment rolls, and latterly to the growth and persistence of disability benefits (see Chapter 2). In unemployment insurance systems, claims are generally time-limited, to encourage job-seeking behaviour: in this interpretation, Incapacity Benefits not only came with virtually unlimited duration, but were also subject to much less regular monitoring of claimants than other benefits, both at the point of entry to the system and throughout their claim (Bell and Smith, 2004). Applied to trends after 1995, this analysis becomes much less plausible because of tightened criteria for new and continuing IB claims (see Chapter 2 for more detail).

However it is worth testing this idea further against the growth in the Incapacity Benefits caseload before this date, especially to the large increases seen between 1987 and 1994. Published data on the outcomes of referrals of claims for Incapacity Benefits to Regional Medical Officers (RMOs), responsible for granting and renewing access to IB, are available from 1982 to 1994. Bell and Smith (2004) use this data to suggest that the rigor with which the system was policed declined during the 'growth phase' of Incapacity Benefits. Consistent with their thesis, the proportion of new claimants referred to RMOs 'examined' decreased from 40% in 1982 to 32% in 1994. However, it is also evident that the caseload of long-term

Incapacity Benefits was already increasing in the early 1980s, albeit at a slower rate, pre-dating the drop-off in examination rates (*Figure 4.15*). This makes it more difficult to identify whether relaxed rules led to a growth in the caseload or whether an increased caseload made it harder to police claims.

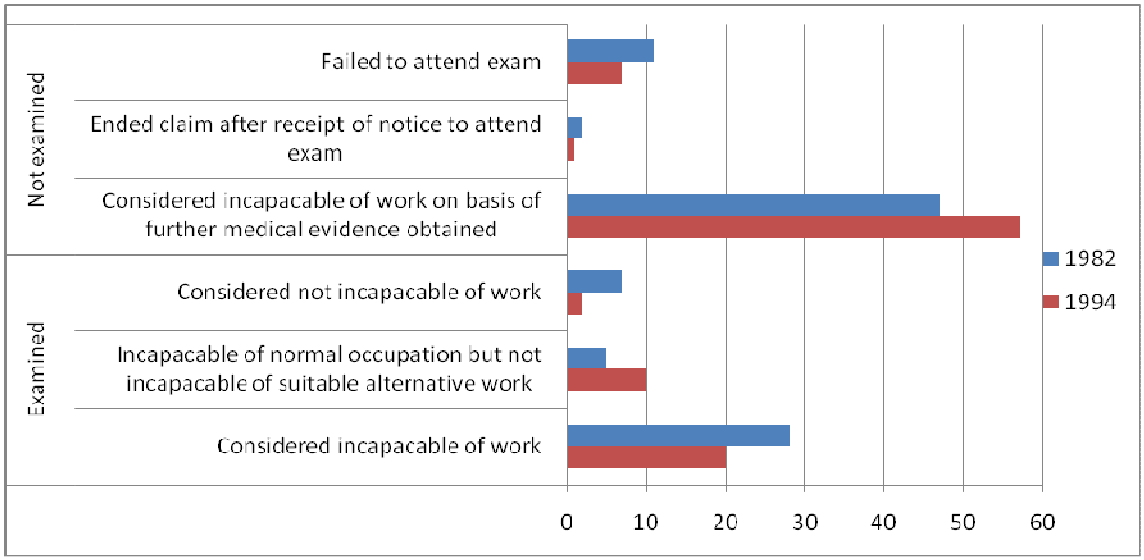
Figure 4.15: Trends in examined IB claims and LT-IB working-age caseload, 1981-1994



Source: Social Security Statistics (Various Years).

More detailed analysis of RMO trends can drill down into these broad trends to provide more detail on the outcomes from referrals (*Figure 4.16*). Between 1982 and 1994, the proportion examined and considered 'incapable of normal occupation but not incapable of suitable alternative work' doubled from 5% to 10%, although given the degree of spatial and skills mismatch, it was by no means clear, for instance, what alternative suitable work was available (see 4.2). Furthermore, the proportion 'not examined, considered incapable of work on basis of further medical evidence obtained' increased from 47% to 57%: a possible interpretation being that administrators were shifting towards a more 'medical' model of disability, with less recognition of social and economic barriers to employment (Wikeley, 1995). In addition, other markers that might suggest inappropriate or opportunistic claiming (such as those whose claim was ended because they failed to attend an exam, or who ended a claim themselves after being asked to attend such an exam) fell over time.

Figure 4.16: Results of Referrals to Regional Medical Centres, Great Britain: 1982 and 1994 compared



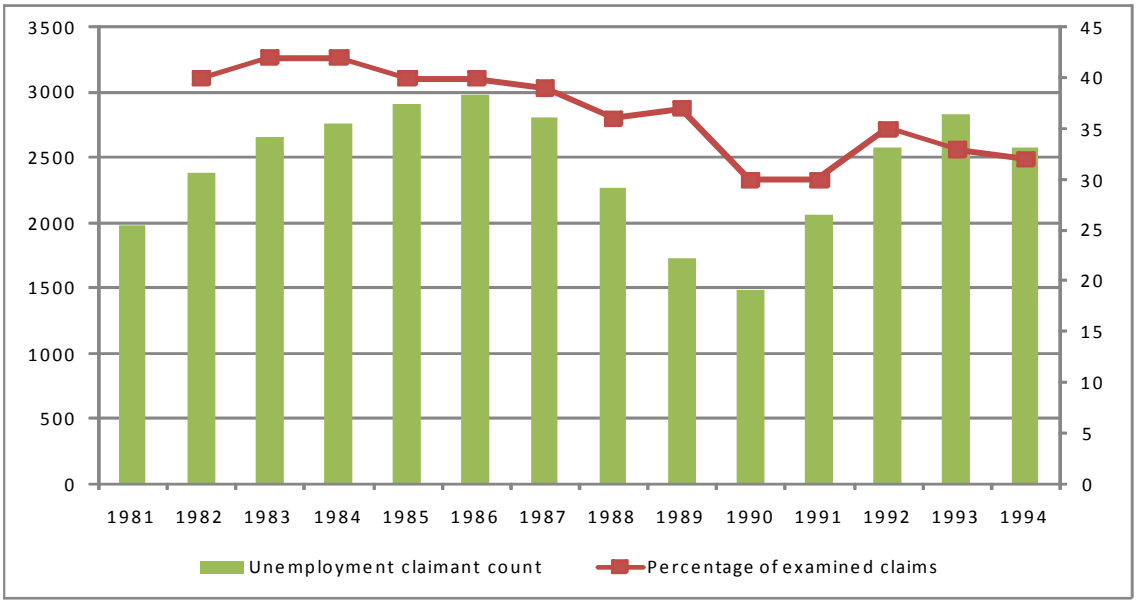
Source: Referrals of claims for sickness benefit/IVB to Regional Medical Centres, 100% sample

There is a risk that focusing on the administrative rules attached to Incapacity Benefits (IB) may divert attention from the broader context in which these decisions are made. At a national level, while it is difficult to identify explicit administrative changes to *Incapacity Benefits* in the latter half of the 1980s, this period did coincide with increasing conditionality for *unemployment benefit* claimants, notably the introduction of Restart and the 'Stricter Benefit Regime' (Van Reenan, 2001). The downward trend in the proportion of examined IB claims was also preceded by the peak year (1986) for claimant unemployment (*Figure 4.17*). During periods of difficult economic adjustment when benefit caseloads are high, administrators may struggle to provide benefit claimants with an effective level of support or to effectively scrutinise claims (McNeil, 2009; Mansfield, 1988).

It is difficult to avoid the conclusion the sickness-related economic inactivity was indeed partially driven by the welfare regime – but not in the way envisioned by advocates of moral hazard. Indeed, it is more plausible that attempts to implement measures to counter moral hazard among the unemployed, without engaging with other more pressing issues, may have ironically created a situation where the low-skilled with health problems were more likely to

claim IB (Webster, 2005; MacKay, 1999). Finally, it must be remembered that the major issue driving up the caseload of working-age people claiming Incapacity Benefits was increased duration, rather than increased inflows (Disney and Webb, 1991; Anyadike-Danes and McVicar, 2008).

Figure 4.17: Trends in percentage of IB claims examined and unemployment claimant count, Great Britain: 1981-1994



Source: Annual Abstract of Statistics; Social Security Statistics (Various volumes).

4.3.3 National rules and local outcomes

The capacity of benefit rules to shape labour market outcomes differs across geography as well as time. Re-analysing the 2004 Benefit Leavers Survey, with working-age Incapacity Benefit leavers grouped into the five 'economic clusters' introduced in Chapter 3, makes this plain. In 2004, the likelihood of an adult finishing a claim for Incapacity Benefits moving into employment varied substantially between clusters. While a clear majority of IB leavers in Prospering Britain (60%) gained a full-time or part-time job, this figure fell to 49% in the Conurbations cluster and 37% in Greater London (*Figure 4.18*). Closer inspection of the results for individual Conurbations suggests that these results were strongly driven by poorer employment outcomes for IB leavers in the Strathclyde region, where just 39% moved into employment after leaving Incapacity Benefits (*Figure 4.19*).

Figure 4.18: Percentage of working-age adults finishing a claim for Incapacity Benefits whose destination was employment (FT/PT): economic cluster, 2004

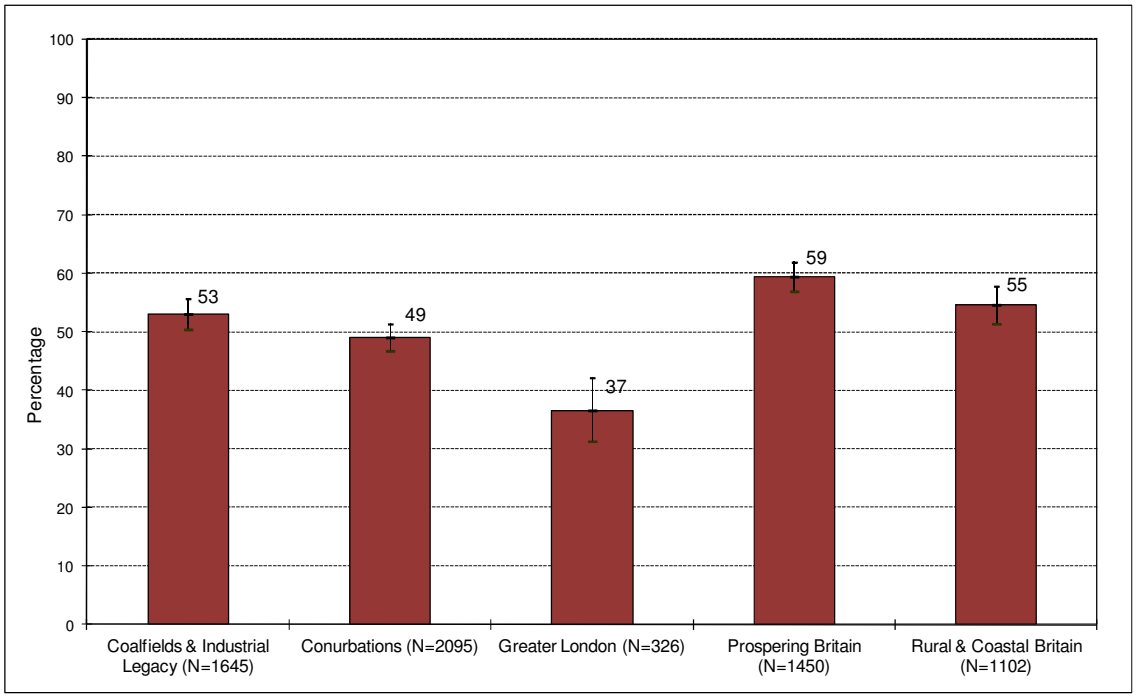
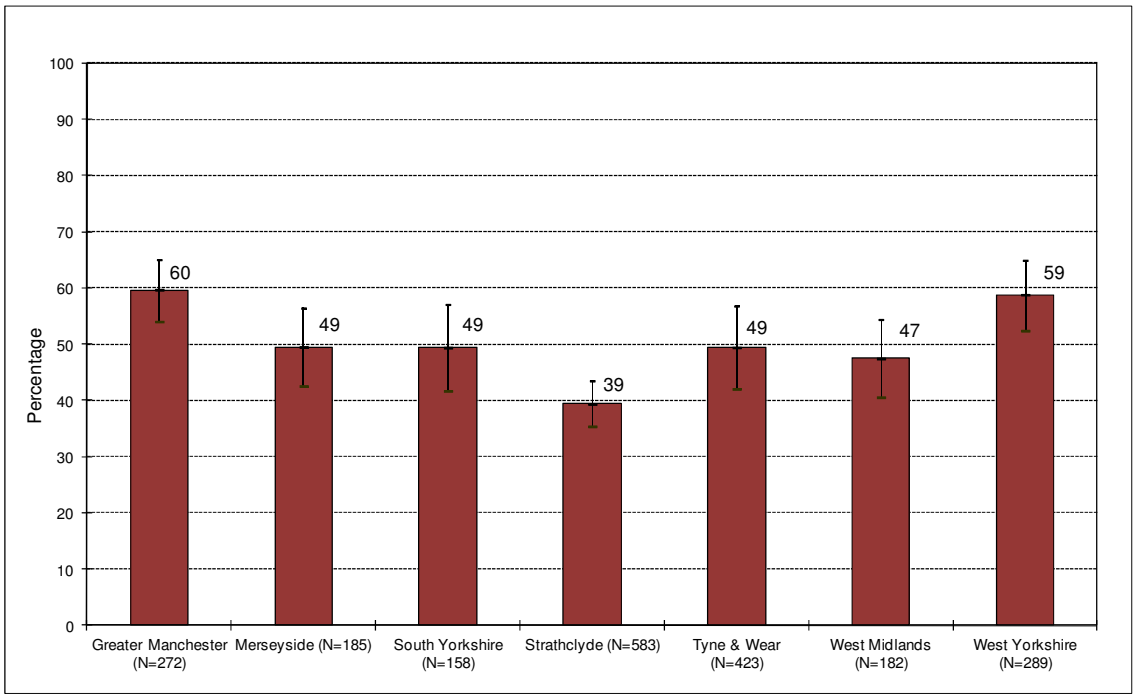


Figure 4.19: Percentage of working-age adults finishing a claim for Incapacity Benefits whose destination was employment (FT/PT): Conurbation, 2004



Sources: Benefit Leavers Survey 2004 (Original Analysis for thesis).

Figure 4.20: Percentage of working-age adults finishing a claim for Incapacity Benefits moving onto another benefit: economic cluster, 2004

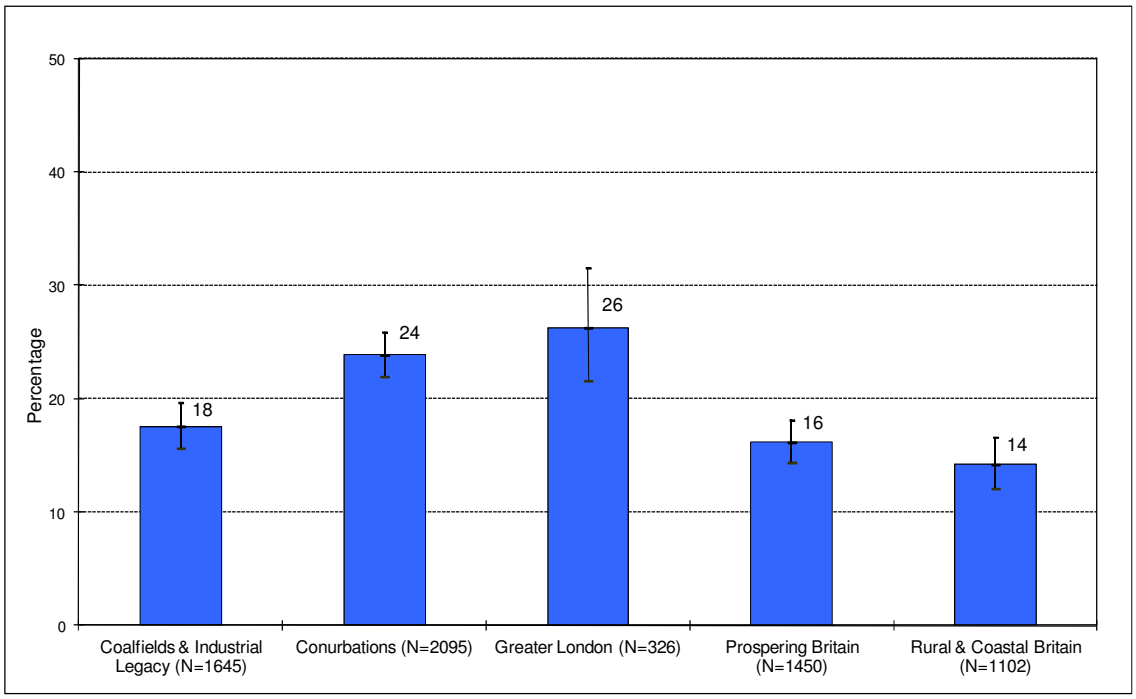
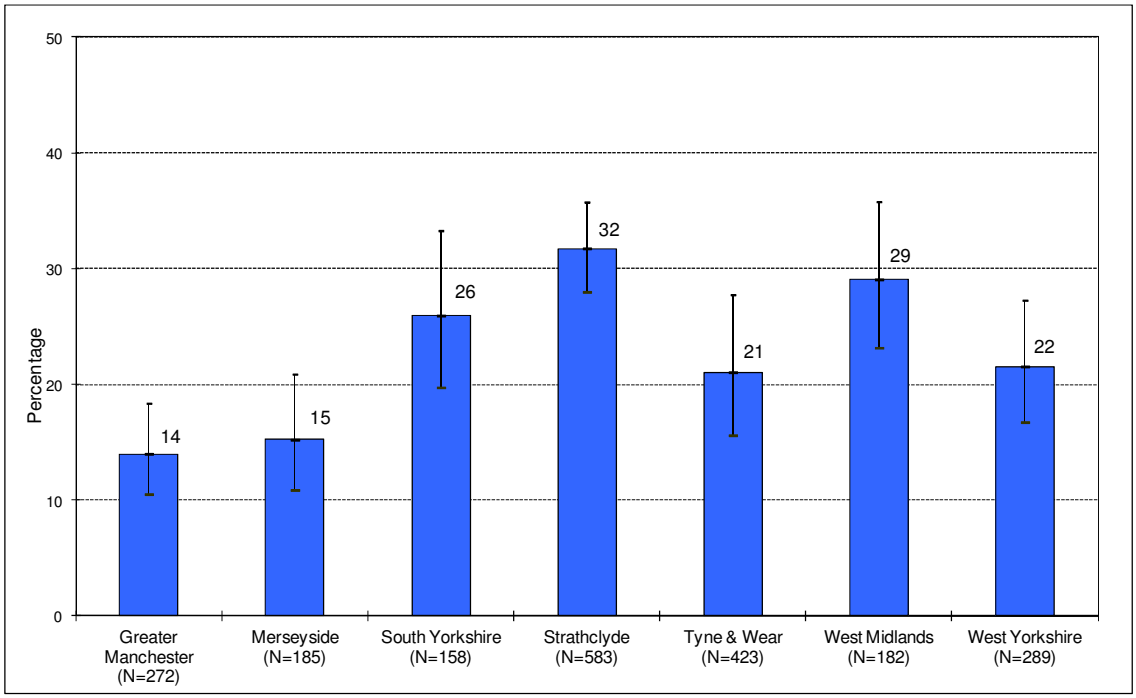


Figure 4.21: Percentage of working-age adults finishing a claim for Incapacity Benefits whose destination was another benefit: Conurbation, 2004



Sources: Benefit Leavers Survey 2004 (Original Analysis for thesis).

Differences in 'cycling' are almost a mirror image of results seen for moves into employment. In 2004, more than a quarter of those finishing an IB claim in Greater London and the Conurbations moved onto another benefit for working-age people (*Figure 4.20*). Cycling rates were lower in Prospering Britain and Rural and Coastal Britain. As with employment outcomes, a distinct 'Strathclyde effect' was evident in the Conurbations: 32% moved onto another benefit after finishing an IB claim (*Figure 4.21*).

London's poorer outcomes are harder to account for. It may be that given the low SREI rates in the capital, IB claimants there have the most severe health problems and their status is less reflective of 'hidden unemployment'. Alternatively, Greater London has experienced a profound shift from an industrial to a financial services-led city over the last 30-40 years, accompanied by polarisation in its jobs market. If employment opportunities for the least skilled and healthy in the capital are particularly bleak, this might mean that IB also functions to disguise unemployment there, though on a much smaller scale than that seen in the Conurbations and Coalfields & Industrial Legacy areas.

4.3.4 Local replacement ratios and SREI through time

There is very limited evidence of a connection between IB generosity and sickness-related economic inactivity across time, but what about place? Lower earnings in some places might make it relatively more worthwhile for some people to claim benefits rather than remain in the labour market. To explore this idea, local IB 'replacement ratios' for the counties of Britain were calculated for all three Census years. A familiar concept when applied to pensions or unemployment benefits, the local replacement ratio used here is calculated from two pieces of information:

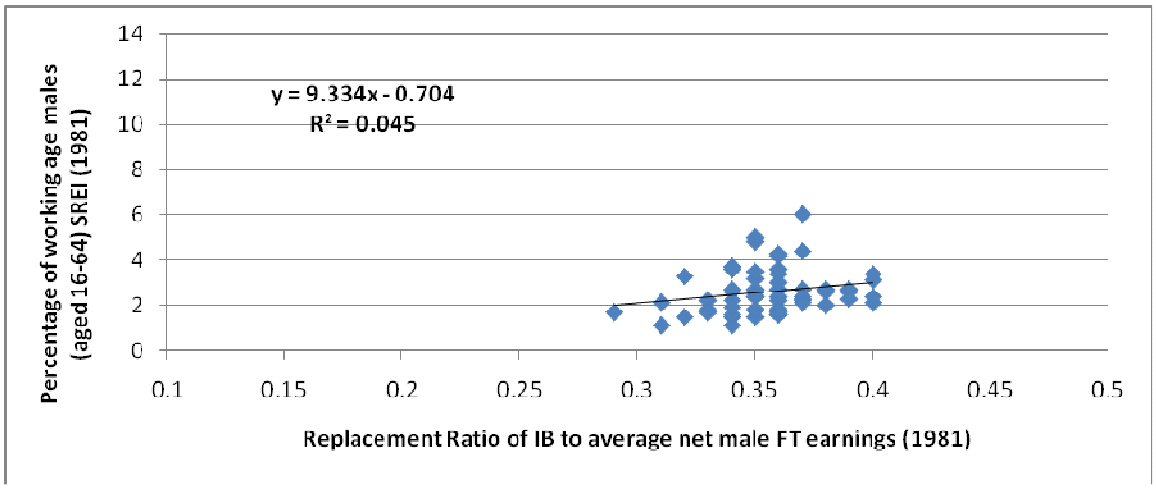
- Average weekly earnings after tax but before housing costs, for a full-time male employees aged 21+ and full-time female employees aged 18+, taken from the New Earnings Survey
- The average value of weekly Incapacity Benefits payments to a hypothetical claimant aged 40+, taken from official statistics

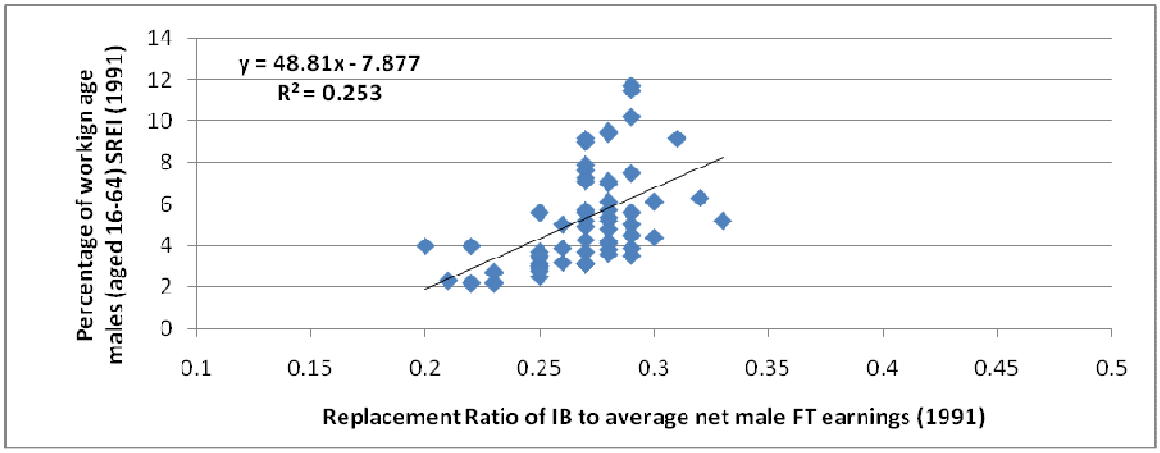
Limitations on earnings data and county-level housing costs mean that the focus is on *average earnings before housing costs* (in contrast to Figure 4.13, which uses *half average earnings after housing costs*). Nevertheless, this measure gives some idea of the difference of variation in the *local* premium for claiming benefits. More information on the data sources is available in Chapter 3.

The simple linear association between this variable and working-age SREI was examined, for men (*Figure 4.22*) and women (*Figure 4.23*) separately, for 1981, 1991 and 2001. At the start of the period (1981), no significant linear association between local IB replacement ratios and working-age permanent sickness/disability was observed for either sex. However by 1991, the association had become significant, with local variation in the IB replacement ratio 'explaining' a quarter of the variation in the percentage of working-age men permanently sick and disabled (R Squared=0.25) and just over 10% of the variation (R Squared=0.11) for women. In the subsequent decade, the strength of this association remained unchanged by 2001 for men but increased slightly for women.

It must be acknowledged this analysis lacks subtlety. Women are more likely to work part-time; it was men in unskilled manual employment who bore the brunt of the initial wave of job losses in the 1980s. Nevertheless, it does suggest that interaction between local earnings and national benefits became more important factors in determining the spatial distribution of working-age permanent sickness in the 1980s. These mechanisms are likely to reflect an increase in faster increases in earnings in more affluent parts of Britain rather than increased generosity in the benefits system. Incapacity Benefits saw their value flat-line in the 1980s. In the 1990s, a small rise in the real value of IB was recorded, but the effect on SREI was minimal. Furthermore, actually accessing such benefits remains far from straightforward. As noted elsewhere in the context of non-employed men, claimants *"do not simply have a free choice to respond to the financial incentives and claim the benefit most favourable to them. All benefits have qualifying rules"* (Beatty and Fothergill, 2003: 123).

Figure 4.22: Association between male IB replacement ratio and male working-age (16-64) SREI, British counties: 1981, 1991 and 2001





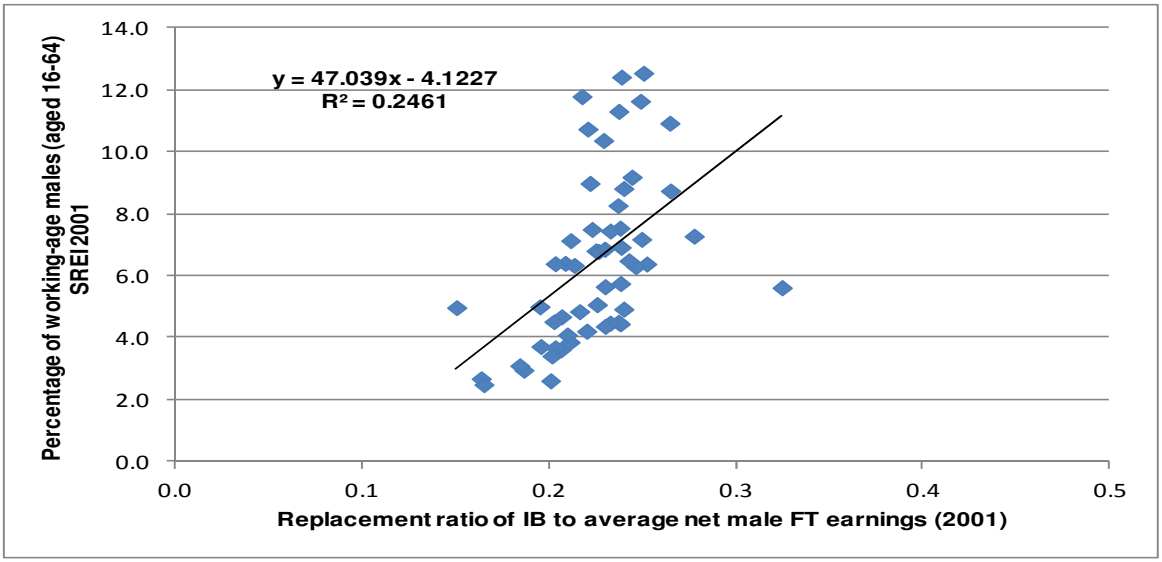
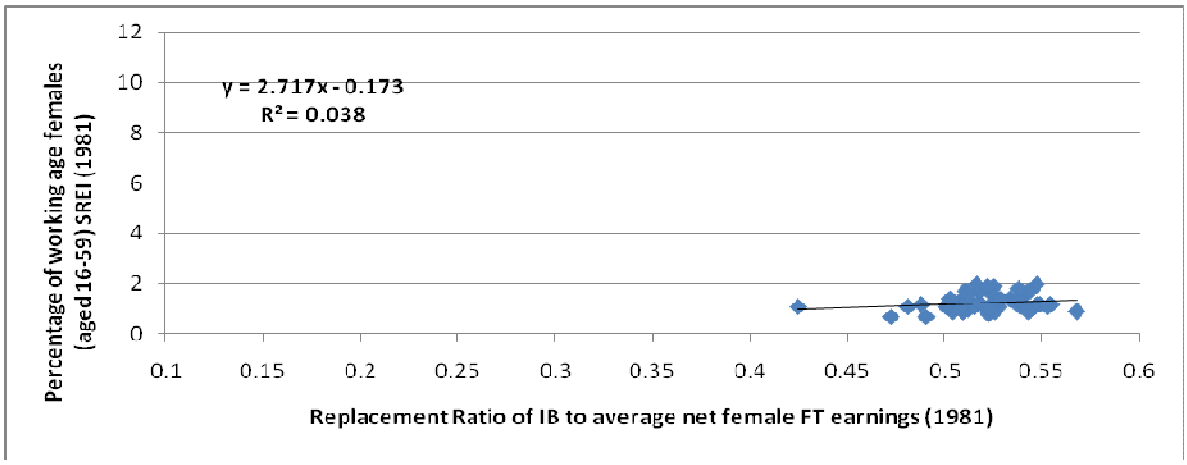
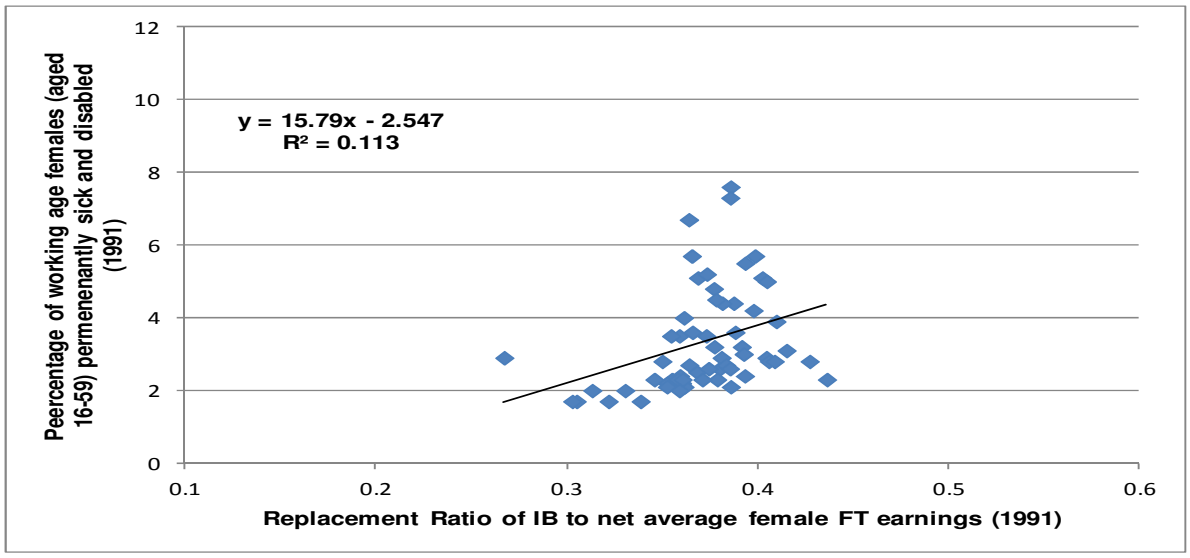
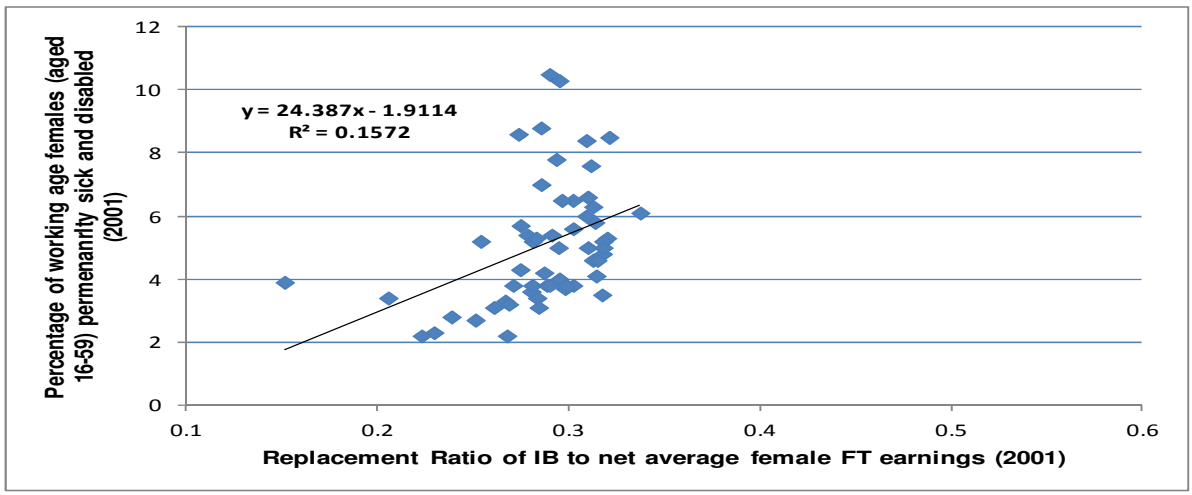


Figure 4.23: Association between female IB replacement ratio and female working-age (16-59) SREI, British counties: 1981, 1991 and 2001







4.3.5 Summary

Increased generosity of Incapacity Benefits (IB) has been advanced by some commentators to account for the growth in SREI in Britain. The evidence to support this view remains weak. Inflows to IB grew at their fastest rate between 1987 and 1996, years which saw the real value of these benefits and its value relative to unemployment benefits stagnate, and its capacity to replace earnings fluctuate without substantive change. More plausible are explanations that focus on the interaction between different parts of the benefits system and the local context in which uniform national rules are applied. Growth in inflows to IB coincided with the introduction of much more tougher qualifying rules for unemployment benefits. The strengthening association between local replacement rates and SREI over time lends weight to the argument that SREI increasingly functioned as a form of 'hidden unemployment'.

The prospects of someone leaving IB on a sustainable basis are shaped by a mixture of national rules and local circumstances. This is important given that growth in SREI was driven much more by the collapse in outflows rather than increased inflows. At the level of 'clusters', the continuum of outcomes – if Greater London is discounted – tallies closely with what might be expected, with less cycling and better employment outcomes in Prospering Britain and Rural & Coastal Britain than in the Coalfields & Industrial Legacy Areas and Conurbations. Relatively poor outcomes for IB leavers in Strathclyde and Greater London are more difficult to account for in terms of labour market strength alone and may require further study. But the general lesson seems to be that inflexible application of national benefit rules alone, in very different contexts, is unlikely to improve flows into employment and reduce 'cycling' onto other benefits.

4.4 Explanation III: Employability

So far, the possible explanatory factors have concentrated on labour market 'demand-side' causes or on incentives in the welfare system, intended or otherwise, to move onto Incapacity Benefits. A third alternative, expressed on a number of occasions, is to focus on skills (including soft skills) and basic qualifications. This remains a key element to the Government's welfare to work policy, with the 2006 DWP White Paper commentating that: *"we cannot expect people to get lasting and worthwhile jobs if they lack the skills required in the new economy…only through increasing skills can we achieve our aim of a high-productivity, value-added economy with increased social mobility and social justice"* (DWP, 2006: 78). The implication is that growth in sickness-related economic inactivity in Britain was driven strongly by skills mismatch. This section uses two formal measures of skills, qualifications and occupational background, to consider how true this is.

4.4.1 Lack of qualifications and workforce skills

Substantial numbers of Incapacity Benefit claimants lack formal qualifications: perhaps a third of new claimants and up to three-fifths of the caseload (Beatty et al, 2009b; Kemp and Davidson, 2007). As such, their prospects for re-engagement with the labour market are likely to be closely-tied to the fortunes of the low-skilled. Therefore understanding how employment rates of working-age adults with no formal qualifications vary between counties and clusters is particularly relevant. All things being equal, if demand-side factors are less relevant, then employment rates for this low-skilled group would be similar across the country.

Figure 4.24: Employment rates among working-age people with no qualifications: economic cluster, 2007

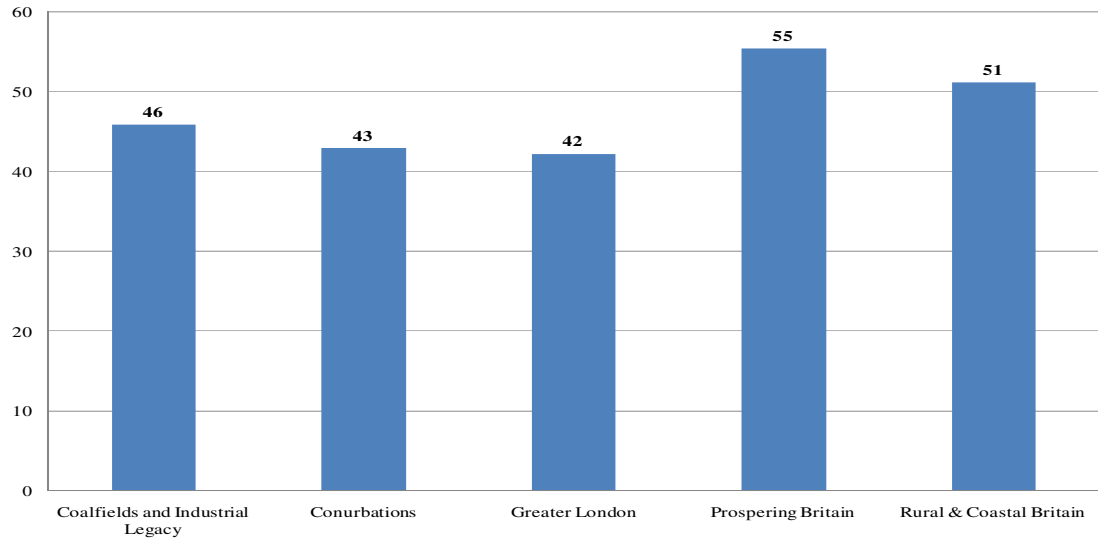
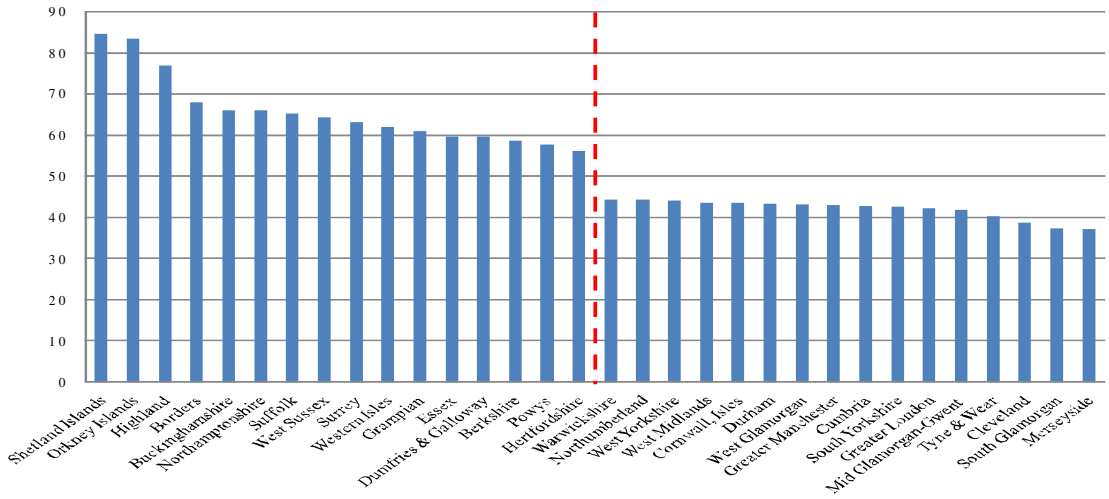


Figure 4.25: Employment rates among working-age people with no qualifications: British counties with highest and lowest rates, 2007



Source: Annual Population Survey January-December 2007

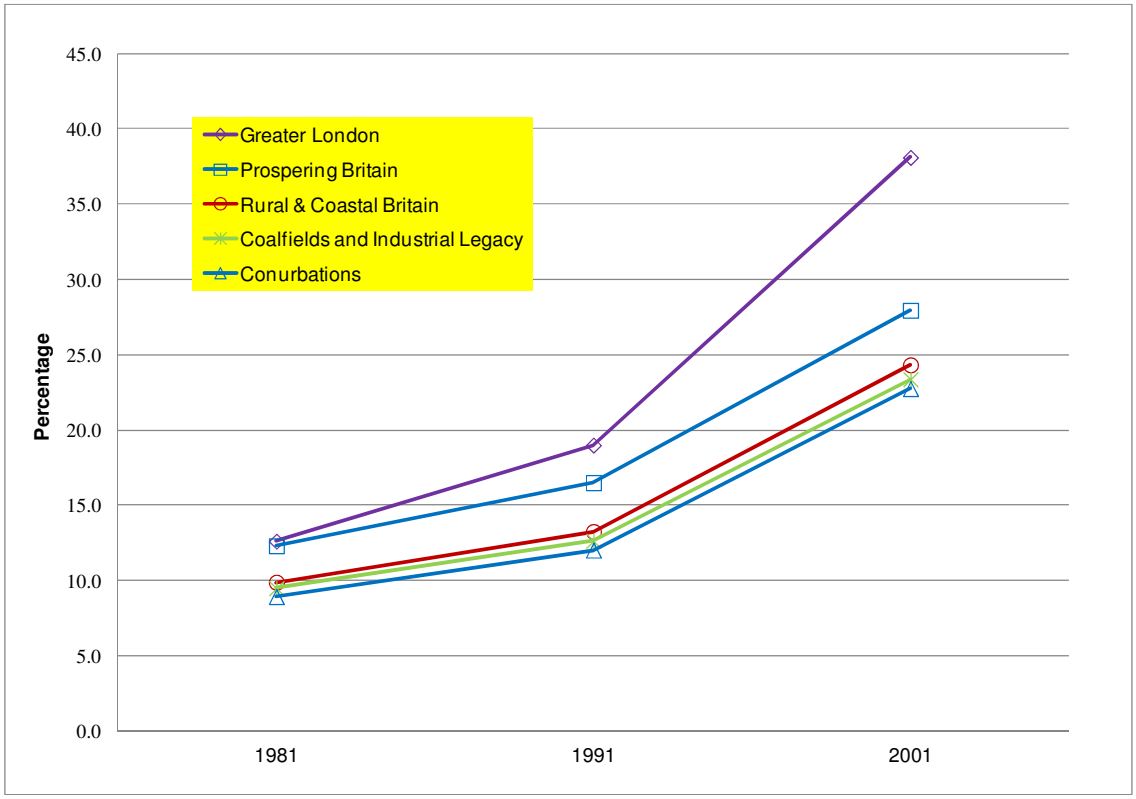
Note: all data for City of London (Greater London) and Isles of Scilly (Cornwall & Isles of Scilly), and numerator data for Teesdale and Alnwick (Northumberland) missing due to small sample sizes.

In fact, as Figure 4.24 shows, geography matters for this group. In 2007, employment rates for those with no formal qualifications were much lower in Greater London and Older Industrial parts of Britain (42%-46%) than they were in Rural and Coastal (51%) and Prospering (55%) Britain. The differences are even more marked at individual county level; working-age residents of Essex without qualifications have an employment rate 23 percentage points higher than their peers on Merseyside (*Figure 4.25*). Three counties (Cleveland, South Glamorgan and Merseyside) have especially low employment rates for people without qualifications. These findings are consistent with a previous study by Erdem and Glyn (2001), which showed (using Labour Force Survey data) that non-employment rates for those in the lowest educational quartile vary a great deal throughout the UK.

The Census of Population also allows some examination of the relative importance of employability, subject to some important limitations, between 1981 and 2001. 'Workforce skill' levels (the number of 18-59/64 year olds with degrees, professional or vocational expressed as a proportion of the working-age population) can be calculated from census data for 1981, 1991 and 2001. Of course, this remains a very imperfect measure of employability. It focuses on formal qualifications and ignores the softer skills sought by employers. More importantly, as noted above, the workforce skills of the permanently sick are skewed towards the bottom end of the distribution: the explanatory variable of choice would be the working-age population with no qualifications for each county rather than the highly skilled. Nevertheless, despite this limitation it is the best proxy available at a county level.

Trends in this measure of workforce skills can also be calculated for the 64 counties. Summary results for the five economic clusters are shown below (*Figure 4.26*).

Figure 4.26: Percentage of working-age adults with a degree or prof. vocational qualifications: economic cluster, 1981-2001



Source: 1981-2001 Census

In all five clusters, workforce skills increased between 1981 and 2001, though the pace of this increase was much steeper in 1991-2001 than the previous decade. Only limited differences were observed between the Conurbations, Coalfields & Industrial Legacy and Rural & Coastal Britain clusters, in the proportion of the working-age population holding degrees, professional or vocational qualifications. Greater London and Prospering Britain stand out as having a more highly qualified workforce at all three time points. Prospering Britain maintained its advantage over the other three clusters over time. Greater London remains unique: in 1981, its workforce skills (at the top of the spectrum) were similar to Prospering Britain but the gap widened in the 1980s and, in a much more pronounced way, in the 1990s.

4.4.2 (Re)introducing the Beveridge Ratio: the occupational dimension

A reasonable response to the analysis above might be that geographic variation in labour market outcomes simply reflects differences in *population* skill levels: that despite improvements, the pace at which the population gained higher level skills was too limited, especially in the Conurbations. Recent analysis by Little (2009) suggests this may be too simplistic: across the NUTS II areas of Britain, individual characteristics (including possession of qualifications) only partly explain variation in employment rates among those with disabilities. However, since employability is partly about achieving a better fit between the attributes sought by employers and the skills and aspirations of those seeking work, it would be useful to introduce a measure that summarises this across space.

Earlier, an indicator of spatial mismatch between Job Seekers and the estimated total number of vacancies (the U:V or Beveridge ratio) was introduced: that measure, however, ignored qualitative differences in supply and demand. By comparing the vacancies being advertised through the Job Centre Plus (JCP) network by occupational category, against the occupations sought by JSA claimants, it is possible to extend the analysis to see how well the types of opportunities on offer match with the experience and attributes of potential recruits. U:V ratios were calculated for calculated for nine 'standard occupational classifications' (SOCs) across 64 counties and the five economic 'clusters'.

This approach is not without its limitations. As noted in section 4.2.2, JCP vacancies represent only a partial share of the total vacancies in the economy at any point in time; they will be further from the overall level of demand than the employer survey figures, for example. The 'share' of JCP vacancies also varies across standard occupation categories: close to 100% for process and elementary occupations, around two-thirds of skilled trades and sales occupations but less than half of managers, administrative and personal service occupations and less than a fifth of professional and associate professional occupations. On the other hand, the employer survey data did not permit a breakdown of employer vacancies by occupation for Welsh or Scottish geographies, a serious omission given the large

concentrations of working-age permanent sickness/disability in the Valleys of South Wales and West Central Scotland.

Table 4.5 shows the distribution of work experience among recent IB claimants and the general population by SOC.

Table 4.5: Standard Occupation Category of recent Incapacity Benefit claimants and the working-age population in employment: Britain, 2007

Standard Occupation Category	Types of jobs included	IB claimants (*)	Working-age people
1 : Managers and Senior Officials	Store manager, warehouse manager	3	15
2 : Professional Occupations	Police officer, teacher	5	13
3 : Associate Professional and Technical Occupations	Fitness instructor, estate agency	3	14
4 : Administrative and Secretarial Occupations	Secretary, credit controller	9	12
5 : Skilled Trades Occupations	Plumber, welder	18	11
6 : Personal Service Occupations	Hairdresser, nursery nurse	6	8
7 : Sales and Customer Service occupations	Call centre agent,	11	7
8 : Process, Plant and Machine Operatives	HGV driver, sewing machinist	10	7
9 : Elementary Occupations	Cleaner, labourer	28	11

Sources: ONS (2000); Kemp and Davidson (2007); Annual Population Survey 2007.

**Excluding 6% previously employed in 'other' occupations.*

IB claimants are much less likely to have experience in managerial or professional occupations compared to the general population (11% vs. 42%). Instead, lower skilled or crafts-based experience dominates. Two-thirds (67%) of IB claimants are concentrated in four occupations (elementary, skilled trades, sales and process and plant). Given their importance to those affected by sickness-related economic inactivity, the analysis that follows concentrates on these types of job.

The first point to emerge from this analysis is that Greater London is a clear outlier. For all occupations except process, plant and machine operatives and personal service occupations the U:V ratio seen in the capital is much higher than seen in the other economic clusters. While Greater London's labour market problems manifest themselves more in open unemployment than the other clusters, this is unlikely to wholly explain this phenomenon. Instead, the London factors discussed earlier (section 4.2.2) may be at work. Outside of the capital, geographical variation in the U:V ratio differs depending on the occupations examined.

For elementary occupations and skilled trades, U:V ratios in Prospering Britain and Rural & Coastal Britain were comparable to each other but much lower compared with the other clusters. A gradient effect is also visible outside of Prospering Britain and Rural & Coastal Britain, with the U: V ratio for elementary occupations rising from 3.6 (Coalfields & Industrial Legacy) to 5.9 (Conurbations) and 7.6 (Greater London) (*Figure 4.27*). A similar pattern holds true for skilled trades, even if the undercount in these types of vacancies is taken into account (*Figure 4.28*). Those seeking employment in these occupations are more likely to be disappointed if they live in the Coalfields & Industrial Legacy areas, Conurbations or Greater London.

The position for process, plant and machine operatives is worth mentioning because it is rather unusual: here the divide is between Prospering Britain (a ratio close to balance, at 1.3) and the remaining clusters, through even here there is some evidence that the U:V ratio is higher in the Conurbations than other clusters (*Figure 4.29*). Finally, analysis of sales and customer service data suggests a much flatter distribution of U:V ratios outside of Greater London, implying that opportunities in these occupations are more evenly distributed across the country, especially if the undercount in these types of vacancies is taken into account (*Figure 4.30*). However, large numbers of vacancies in sales occupations may also reflect the higher than average turnover rates in sales and retail occupations. Combined with the greater concentration of such jobs in urban centres (especially Greater London and the Conurbations), the prospects for job-seekers to access these opportunities should not be overstated.

Figure 4.27: Beveridge ratio by economic cluster: elementary occupations, May 2007

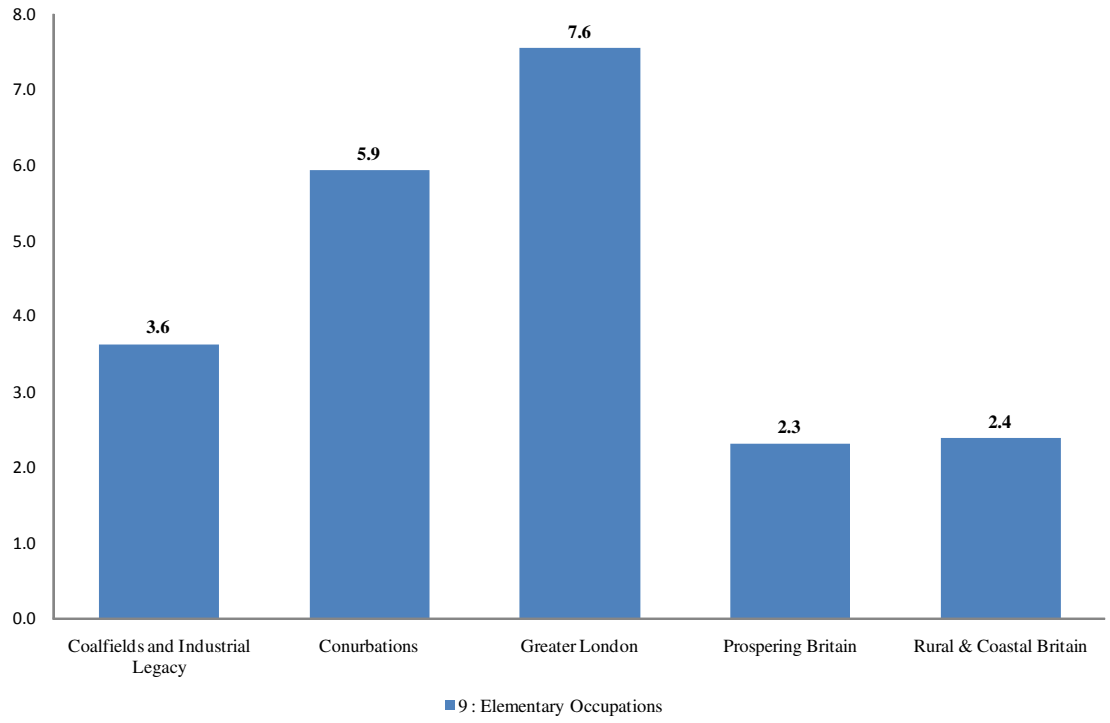
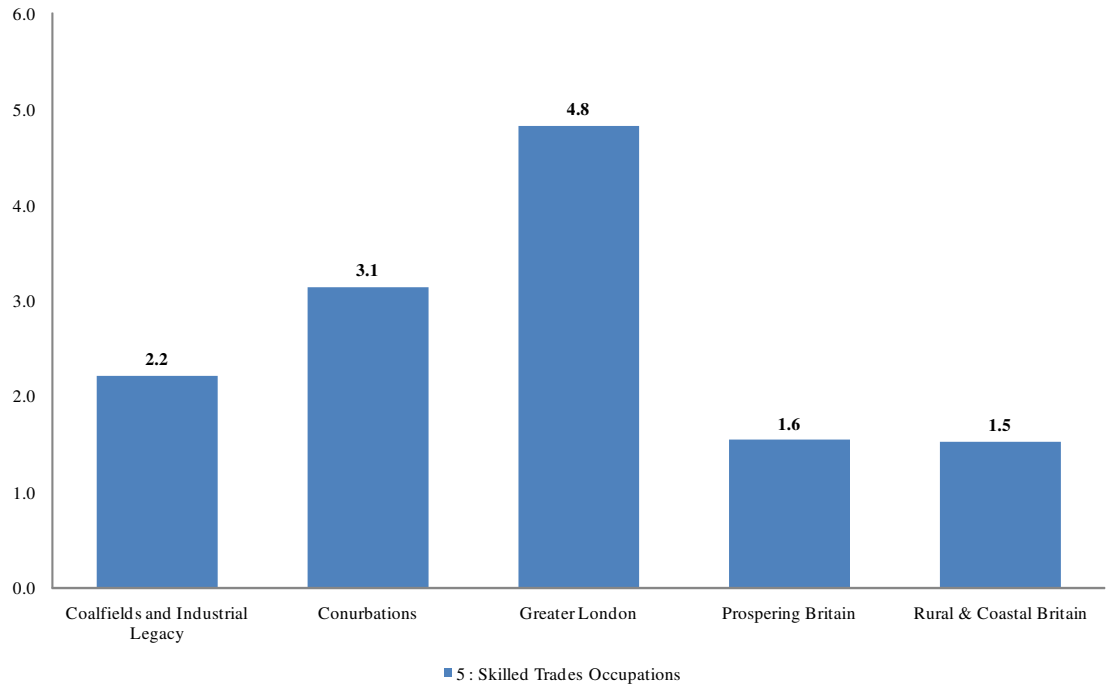


Figure 4.28: Beveridge ratio by economic clusters: skilled occupations, May 2007



Source: Claimant count by sought occupation; JCP live unfilled vacancies

Figure 4.29: Beveridge ratio by economic cluster: process, plant and machine occupations, May 2007

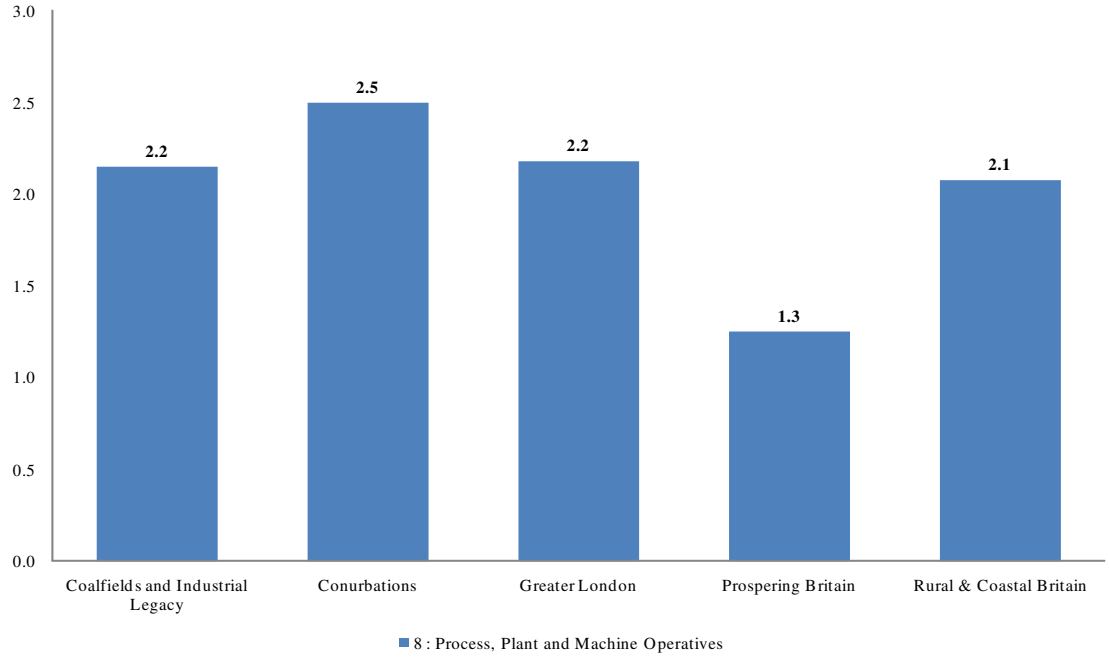
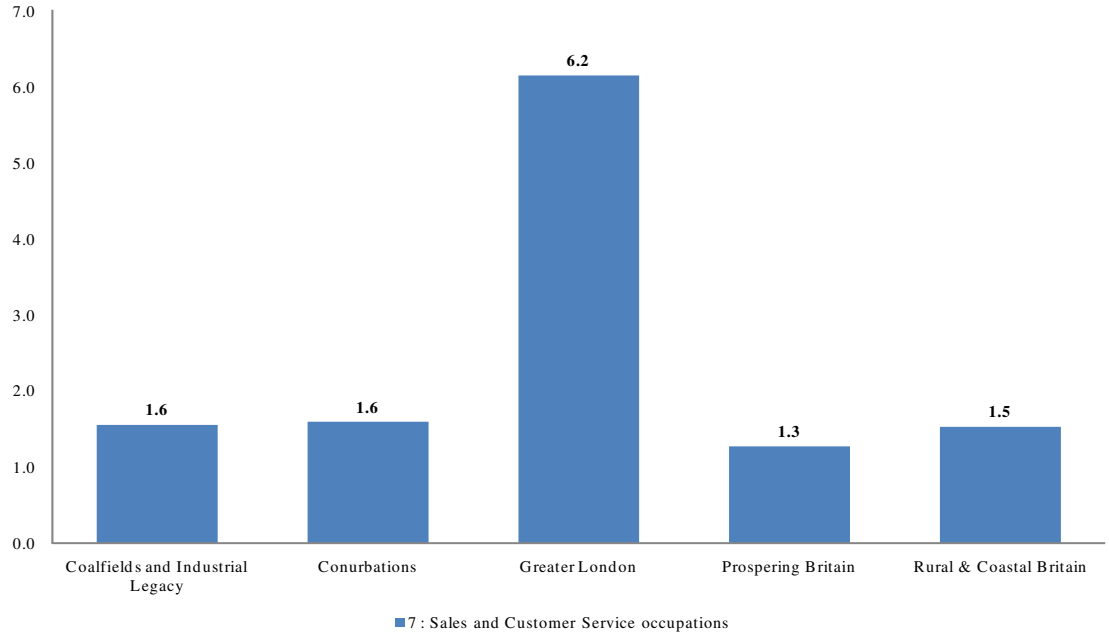


Figure 4.30: Beveridge ratio by economic cluster: sales and customer service occupations, May 2007



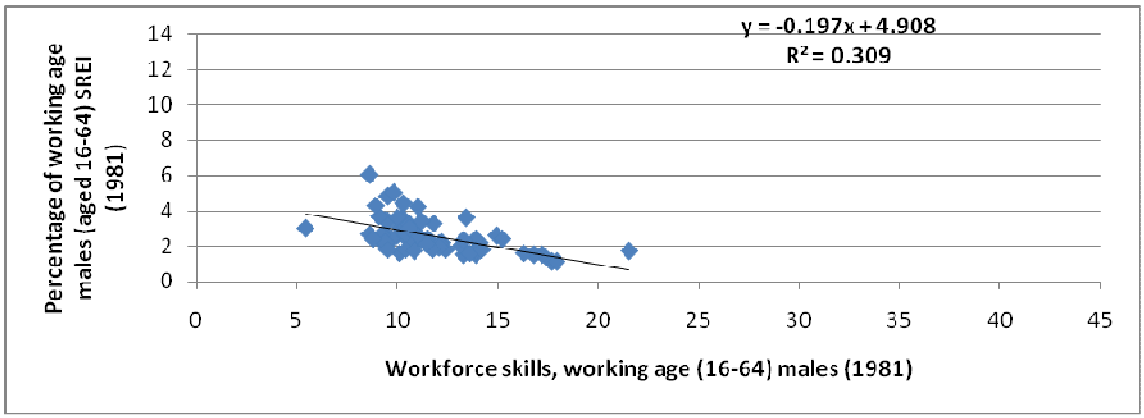
Source: Claimant count by sought occupation; JCP live unfilled vacancies

Based on this analysis, the potential match between occupations sought by the claimant unemployed and vacancies available varies across geography. People seeking employment in elementary occupations, process, plant and machine operatives and skilled manual jobs in the Coalfields & Industrial Legacy areas, Conurbations and Greater London face a much more competitive market than their peers elsewhere. Over half (56%) of recent IB claimants have work experience in these three types of occupation, raising important questions about how hidden unemployment, once it becomes open, might be accommodated. While there may be more scope to integrate IB leavers in sales occupations, measures to boost employability by improving soft skills and basic qualifications may not be sufficient on their own to address this challenge.

4.4.3 Workforce skills and SREI through time

At a county level, linear regression was used to test the association between the workforce skill variable (the explanatory variable) and SREI (the dependent variable), for the three Census rounds and for men and women separately. Beginning with men, this measure was significantly and negatively associated with the prevalence of SREI in all three time periods. However, there is some evidence that the strength of this association weakened between 1991 and 2001, with the R Square falling from 0.346 to 0.197 and the t-value from -5.7 to -3.4 (*Figure 4.31*). Turning to women, no significant linear association was found between the workforce skills measure and permanent sickness in 1981. By 1991, the strength of the association had become significant, though only weakly so (R square=0.138, t=-3.1). In contrast to men, for women the association between SREI strengthened between 1991 and 2001, with the R square rising to 'explain' nearly a third (R square=0.29) of the variation at county level and the t-score increasing to -5.0 (*Figure 4.32*).

Figure 4.31: Association between male workforce skills and male working-age (16-59/64) SREI, British counties: 1981, 1991 and 2001



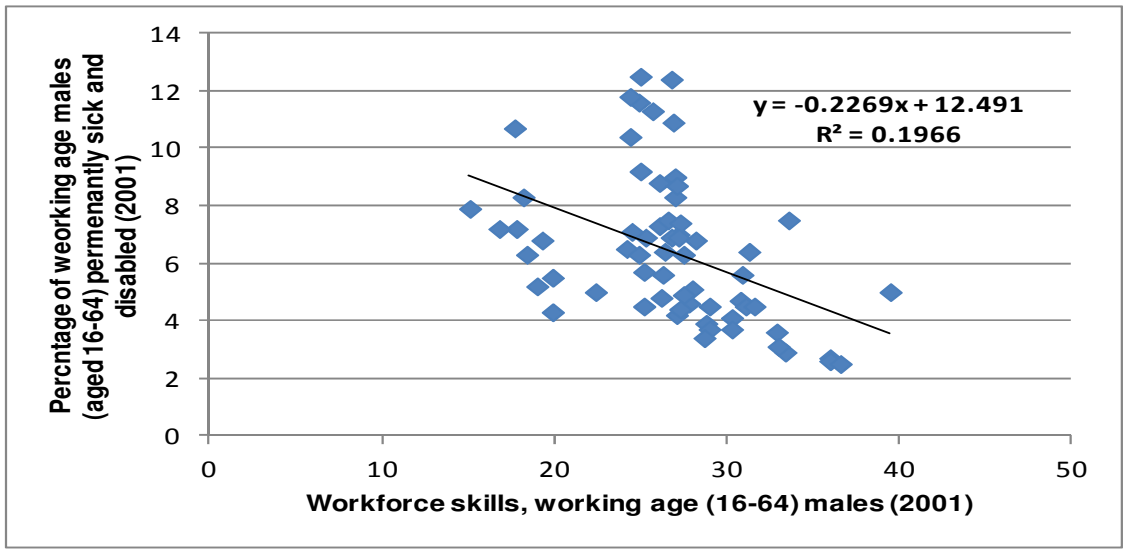
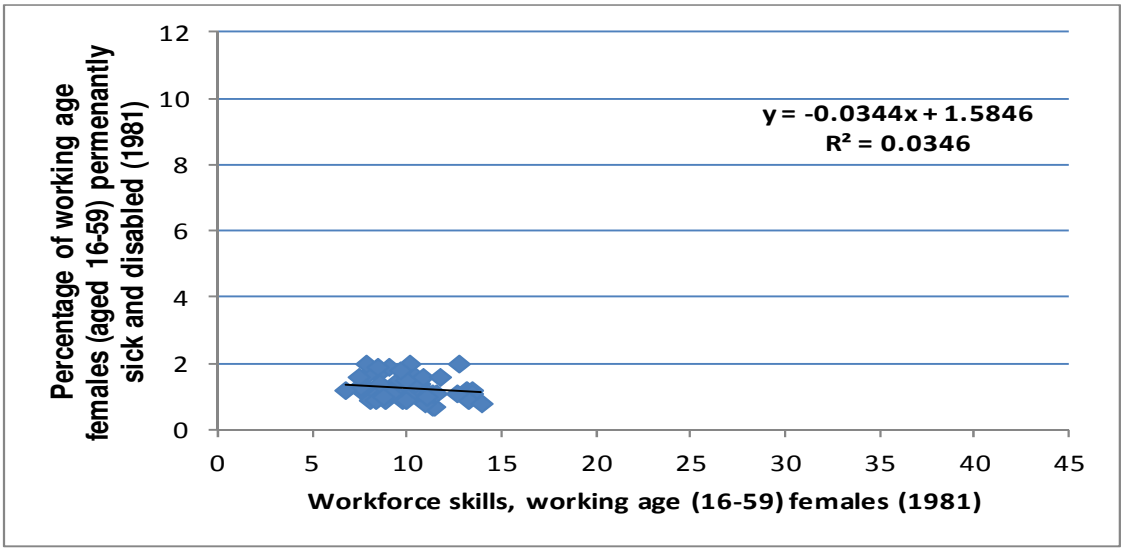


Figure 4.32: Association between female workforce skills and female working-age (16-59/64) SREI, British counties: 1981, 1991 and 2001

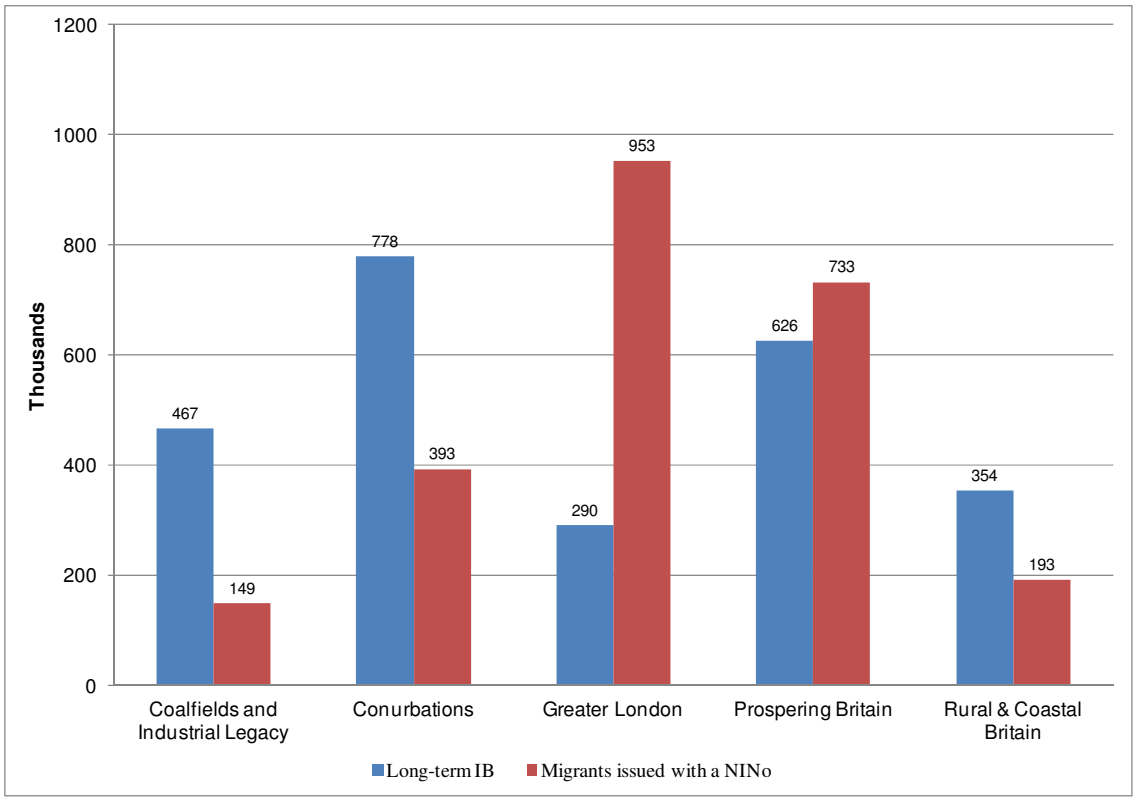


4.4.4 International migration and SREI

The large scale absorption of international migrants (many from A8 countries, especially Poland) into the British labour market has been used as evidence in support of 'employability' arguments and against those which emphasise jobs deficits. As noted in Chapter 2, however, this argument is only partially correct. Many international migrants differ markedly in the 'harder' aspects of employability (qualifications, work experience, housing tenure, health) compared to Incapacity Benefit claimants: this makes them much better placed in the jobs queue to compete for vacancies even if opportunities were distributed evenly across the country. However, a key question is to extent to which migrants are being substituted for (potential) former IB claimants across Britain. If IB claimants and migrants are concentrated in the same local labour markets, then accounts which emphasise supply-side solutions to this issue become much more credible.

The first way we can examine this claim is to compare the distribution of international migrants with a National Insurance Number (NiNO) against the number of long-term IB claimants. NiNO data covers cumulative registrations between 2002 and 2007, while the IB claimant data is from May 2005. Figure 4.33 shows the distribution of the two populations across the economic clusters. In absolute terms, the largest number of international migrants (nearly 1m) was located in Greater London, where they outnumbered the IB claimants more than three to one. However, in the Conurbations, Rural and Coastal Britain and Coalfields and Industrial Legacy area, this position is reversed, with IB claimants substantially outnumbering migrants working in the area. Only in Prospering Britain, where migrants and IB claimants are more balanced numerically, might straightforward substitution of labour be a more plausible argument.

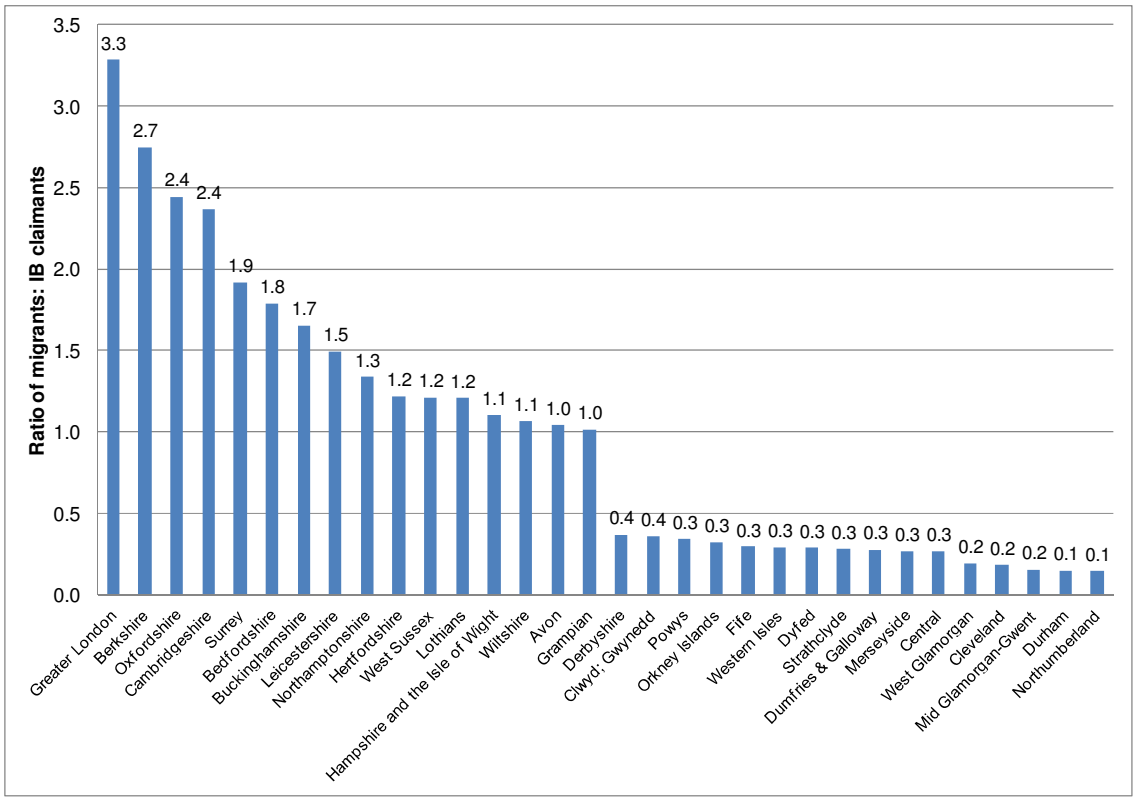
Figure 4.33: Distribution of NiNO registrations and IB claimants, by economic cluster



Sources: NINO Registrations; DWP WPLS 100% sample.

This crude analysis neglects the local differences within clusters: it may for example conceal the greater use of migrant labour in some conurbations. To test this, the ratio of migrants to IB claimants was calculated for all 64 counties. Figure 4.34 shows the counties with the highest and lowest ratio of migrants to IB claimants. In the Home Counties (e.g. Bedfordshire, Oxfordshire, Cambridgeshire) this ratio is very high. There are also a number of counties, mainly in the South and East of England but also including Avon, Lothian and Grampian, where the close alignment between numbers of IB claimants and migrants supports the substitution argument. At the other extreme, large parts of Wales, North-East England, Merseyside and West Central Scotland have much lower concentrations of migrants, and other factors may be more relevant to explaining the concentration of IB in these places.

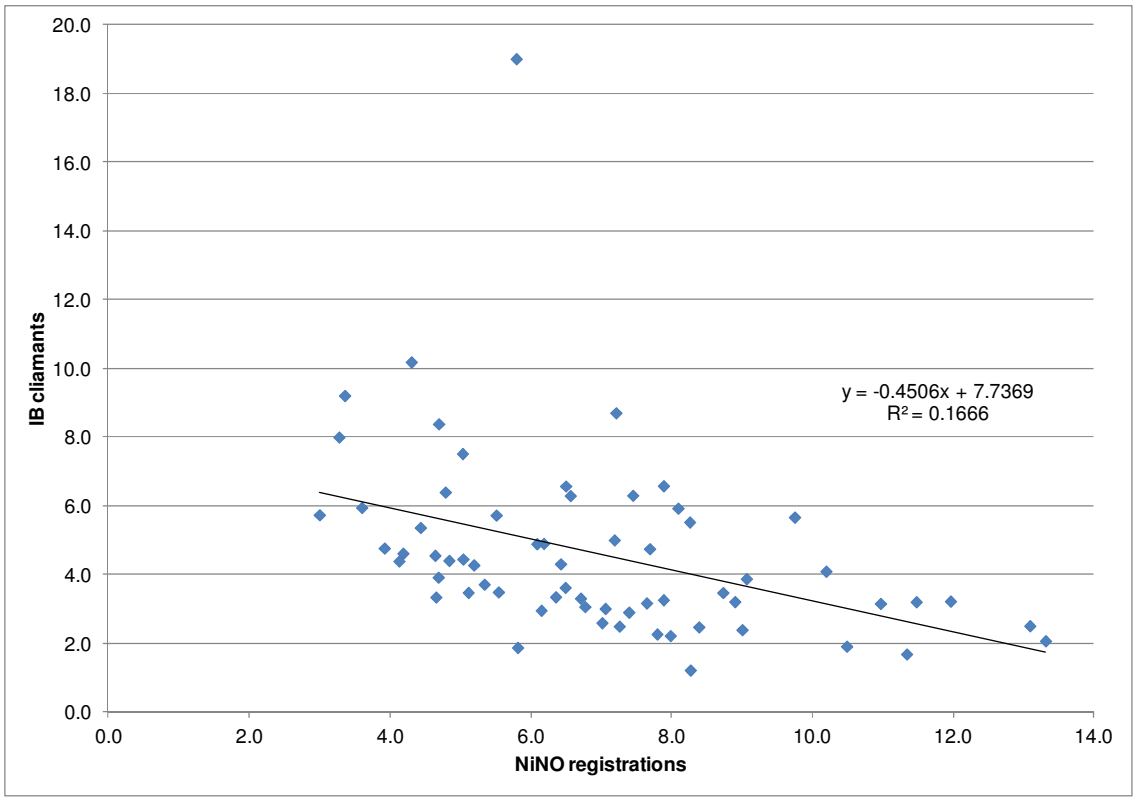
Figure 4.34: Ratio of NiNO registrations to IB claimants, by selected counties of Britain



Sources: NINO Registrations; DWP WPLS 100% sample.

The last piece of analysis uses OLS regression to test the association between migrants and IB claimants (as a percentage of the 2005 mid-year population) across the counties of Britain. If the association is positive and significant, then these groups are concentrated in the same places and we can reject the null hypothesis that migrants are being used as a substitute for IB claimants across Britain. Figure 4.35 shows the relationship is significant but negatively signed: that is, those places with the *lowest* concentrations of IB claimants are likely to have absorbed the *highest* concentrations of migrants. This does not support the official view that large-scale international migration was a response to unmet demand for labour everywhere. Note however, that the association remains weak (R square=0.17), suggesting that decisions of where to locate were not based solely on migrants' perceptions of local labour market demand.

Figure 4.35: Percentage of NiNO registrations vs. percentage of LT-IB claimants



Sources: NINO Registrations; DWP WPLS 100% sample.

All things being equal, migrants were (and are) better equipped to compete for job opportunities that IB claimants, but the numerical imbalance suggests that substitution was much more likely to take place in counties such as Greater London, Lothian, Grampian or Avon (where there were relatively fewer IB claimants) than in Mid-Glamorgan Gwent or Merseyside (where there were relatively more IB claimants). Overall, improving employability alone might be a more pressing issue in Prospering Britain, whereas a mixture of demand-side and supply-side measures might be more relevant in the Conurbations and Coalfield and Industrial Areas.

4.4.5 Summary

Employability in Britain varies by time and place, determined by the interaction of supply and demand. Those affected by SREI tend to be poorly qualified compared to their competitors in the labour market. Recent labour market experience is skewed towards unskilled work, skilled manual occupations, process and plant jobs and sales and customer service occupations. Both issues are challenging, especially given that local labour market conditions are most likely to affect those competing for manual and unskilled jobs. Counties and economic clusters with high SREI rates have more intense levels of competition for elementary occupations and skilled manual jobs in particular. This may partly be reflected in variation in employment rates for those without formal qualifications across Britain. All clusters have seen the proportion of their workforce with professional/tertiary qualifications increase over time. However growth has been most marked in Greater London and Prospering Britain and there has been no convergence between local labour markets. In any case, the real problem remains at the bottom of the labour market. High level education became less associated with the geography of male SREI in the 1990s. A strengthening of the association between SREI and workforce skills for women may reflect their increased participation in the labour market.

4.5 Explanation IV: Health and Wellbeing

As discussed in the literature review, the health aspects of sickness-related incapacity are downplayed by commentators across the spectrum of debate. A general improvement in mortality rates during this period is often cited as proof that the root causes of the problem lie elsewhere (Beatty and Fothergill, 2005; DWP, 2007; Bell and Smith, 2004)[20]. More subtly, Beatty and Fothergill introduce the concept of the 'queue for jobs', where those with health problems are near the back. Nonetheless, given the focus here is on sickness-related economic inactivity, it also makes sense to examine the impact of health problems in their own right. This section examines two measures of health, one self-reported (and subjective) and one based on administrative vital statistics (and therefore more objective) to examine these ideas.

4.5.1 Employment rates and work-limiting disability

The first variable analysed is the employment rate among working-age people with a 'work-limiting' disability. Self-reported through the Labour Force Survey, this measure includes all working-age people who reported that they had a health problem or disability which they considered (a) would last more than a year and (b) affected either the kind or amount of paid work that they could do (Spence, 2003). Excluded from the work-limited group are those who report a disability under the Disability Discrimination Act (DDA-disabled) **only**: their employment rates are little different from the non-disabled population (New Policy Institute, 2009).

Across the five economic clusters, differences in employment rates for those with a work limited disability are quite pronounced. Employment rates of people with a disability are 14 percentage points higher in Prospering Britain than in the Coalfields & Industrial Legacy areas or Conurbations (*Figure 4.36*). Again, the variation is even more obvious when

[20] In the views of some commentators: *"the trend rise in disability over the period is surprising. After all, mortality rates for prime-age males have been falling for hundreds of years and continue to do so"* (Bell and Smith, 2004: 19)

examining differences in this indicator by county: just 28% of West Glamorgan residents with a work limiting disability were in employment, compared with 54% in Buckinghamshire (*Figure 4.37*).

Figure 4.36: Employment rates among working-age people with a 'work-limiting' disability, by clustered area, 2007

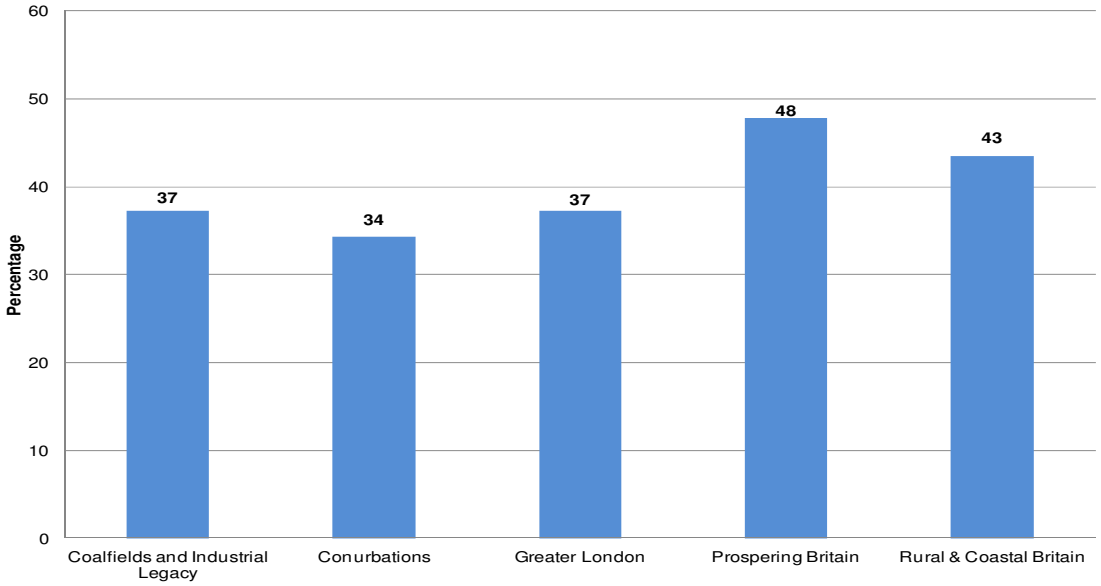
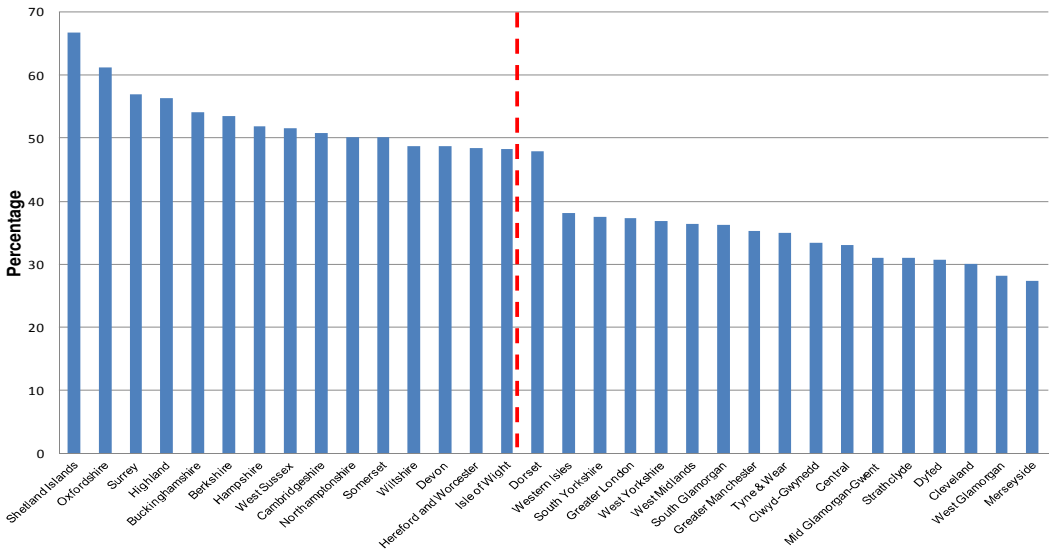


Figure 4.37: Employment rates among working-age people with a work-limiting disability, British counties with highest and lowest rates, 2007



Source: Annual Population Survey January-December 2007

4.5.2 Directly standardised mortality rates

The second measure used to test health inequalities is variation in premature mortality, measured by age-standardised mortality rates for working-age adults (aged 15-64). While not ideal as an independent variable (the direction of causation is likely to run from higher levels of SREI to higher levels of premature mortality), these have two important advantages over other measures of health. First, they provide objective evidence of variation in health across Britain. Second, they are available over a long time period for all 64 counties. Calculating the European Age Standardised Mortality Rates (EASR) gives a way to adjust for the different age structures in each county and region, and allows direct comparisons to be made between the economic clusters and counties.

Figure 4.38 shows EASR among working-age people (aged 15-64) across Britain, by economic cluster, in 2000-02. Mortality rates in older industrial Britain, especially the Conurbations, are extremely high compared with Rural & Coastal Britain and Prospering Britain. Greater London occupies a middle position, which might come as a surprise given the higher mortality seen in other highly urbanised parts of the country. Finer grained analysis, at county level, is also presented for 2000-02 (*Figure 4.39*). Scottish counties are also heavily represented, illustrating the "Scottish effect" (Leon et al, 2003). Strathclyde in particular stands out as having an especially high death rate: 386 per 100,000, which is twice as high as rates seen in Surrey, for example. There is also modest but real overlap between areas with high (low) levels of SREI and high (low) premature mortality. Of the twenty counties shown in Figure 4.2, nine also appear in Figure 4.39, though the Welsh counties are notable by their omission.

Not only was the gap in premature mortality between the clusters and counties of Britain substantial, it was remarkably persistent. For example, while working-age mortality rates in the Conurbations fell from 448 per 100,000 in 1980/82 to 311 per 100,000 in 2000/02, it barely closed the gap with Prospering Britain at all (*Figure 4.40*). As with sickness-related economic inactivity, there is also a high degree of correlation (0.84) between the counties' working-age EASR in 1981 and their subsequent EASR in 2001, suggesting persistent inequalities in spatial premature mortality.

Figure 4.38: European Direct Age Standardised Mortality Rates (EASR), 15-64 year old persons: by clustered area, 2000-2002

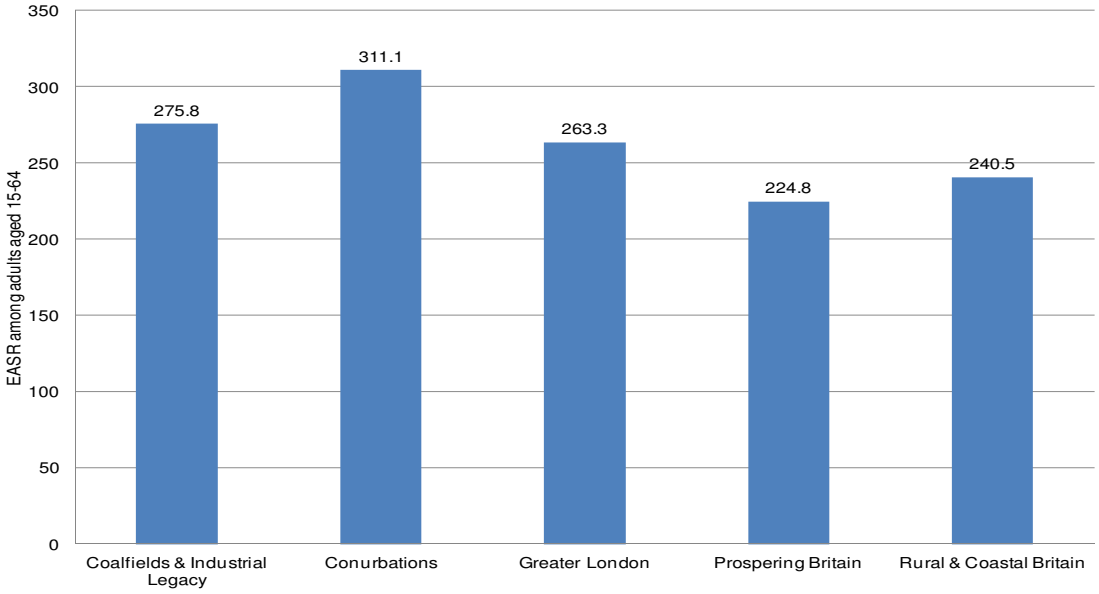
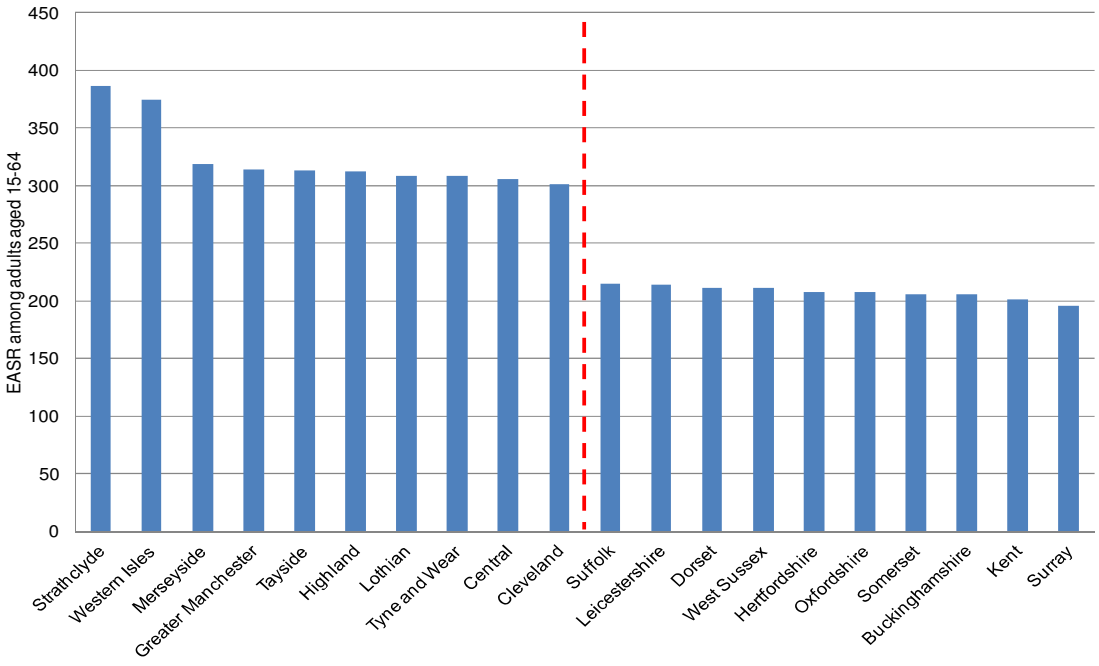
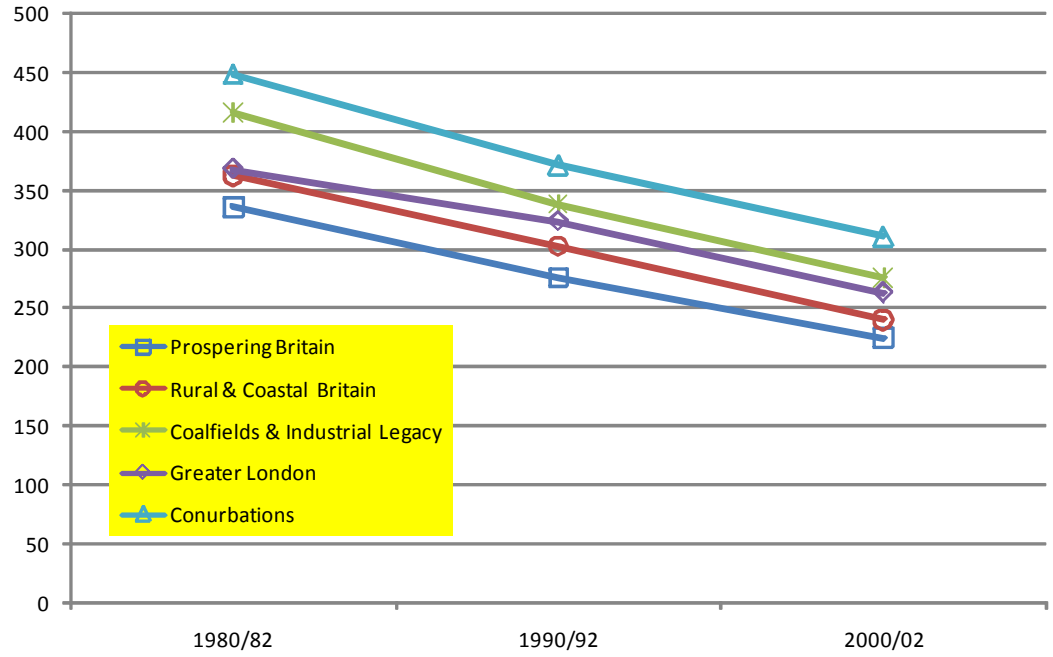


Figure 4.39: European Direct Age Standardised Mortality Rates (EASR), 15-64 year old persons: by county, 2000-2002



Sources: ISD Scotland; GROS; ONS.

Figure 4.40: European Direct Age Standardised Mortality Rates (EASR), 15-64 year old persons, by clustered area, 1980-82 to 2000-2002



Sources: GROS; ISD Scotland; Mid-year Population Statistics

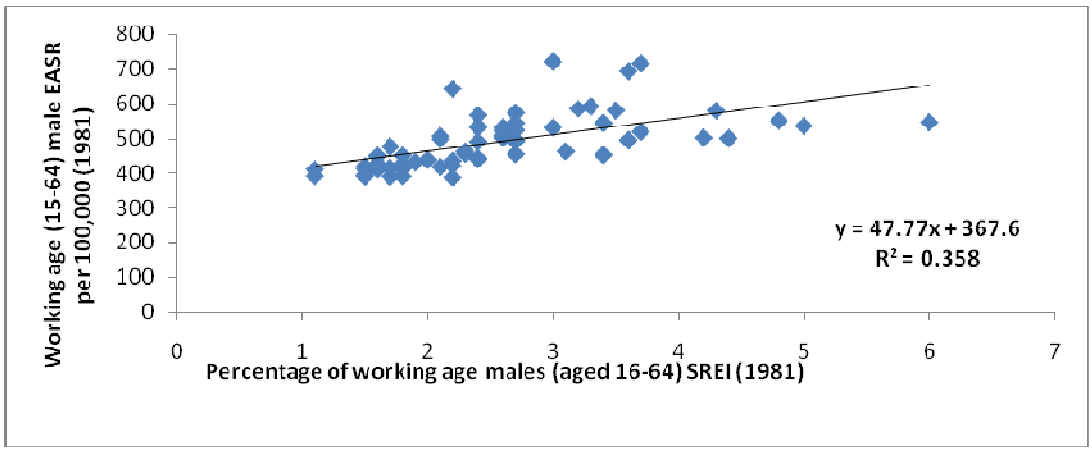
From this perspective, health inequalities underpin sickness-related economic inactivity: if these were reduced, perhaps this form of economic inactivity would not have increased as strongly. On balance, the employment rates of those with disabilities suggest that people with health problems are more likely to be employed in buoyant labour markets, while the mortality rates suggest that more needs to be done to tackle persistent health inequalities.

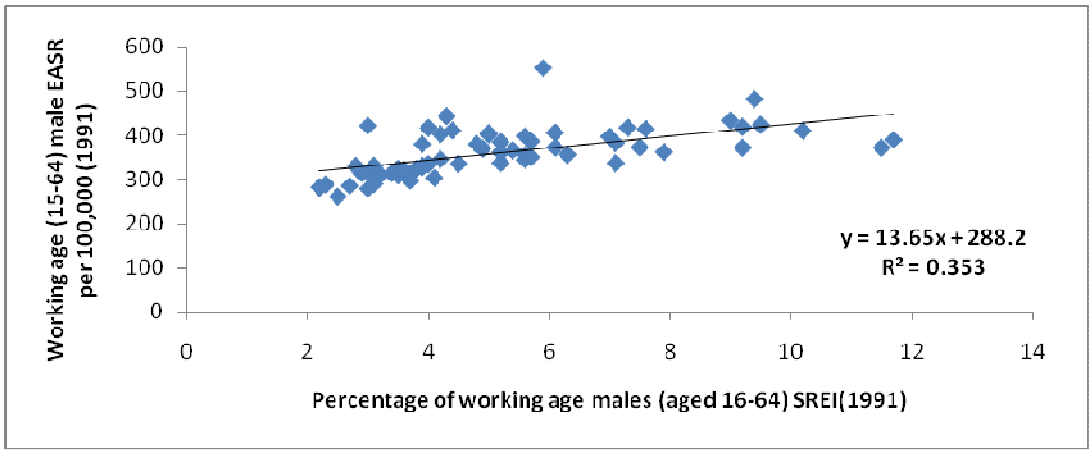
4.5.3 Directly Standardised Mortality and SREI through time

As with the other factors associated with SREI, regression linear regression was used to test the association between SREI and working-age mortality. Standardised mortality rates were calculated separately for men and women, for all 64 counties and for 1980-82, 1990-92 and 2000-02. The results reveal a clear difference between the genders. For men, there was a moderate association between the two variables at county level at all three points in time: the

strength of the association remained consistent through time (*Figure 4.41*). For women, the association appears to have strengthened steadily between 1981 and 1991 and then further between 1991 and 2001 (*Table 4.42*).

Figure 4.41: Association between male working-age (15-64) European Direct Age Standardised Mortality Rates (EASR) and male working-age (16-59/64) SREI, British counties: 1981, 1991 and 2001





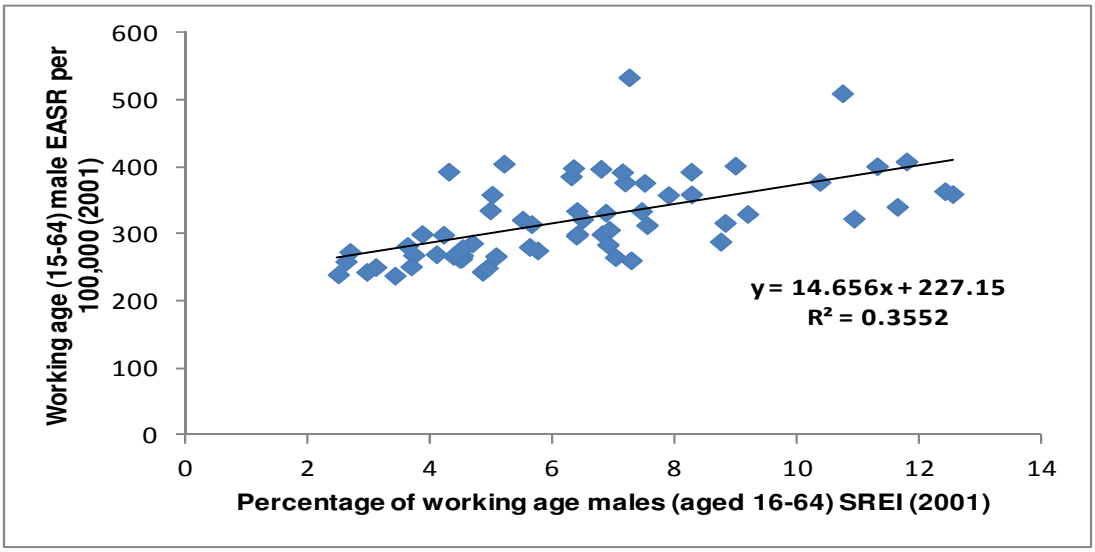
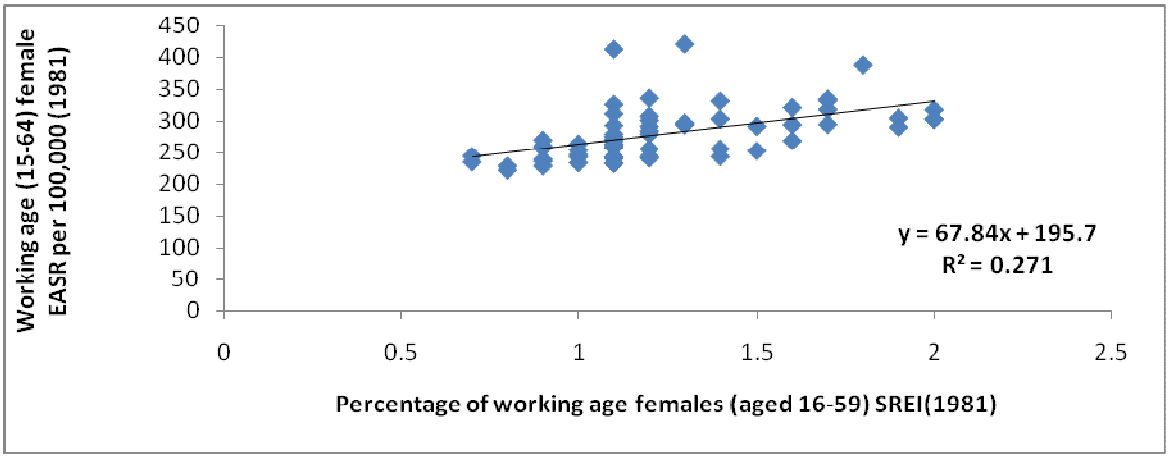
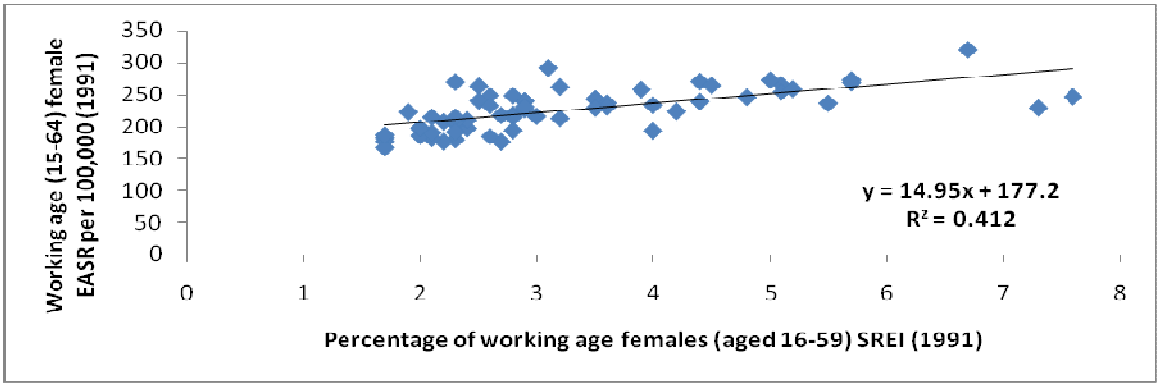
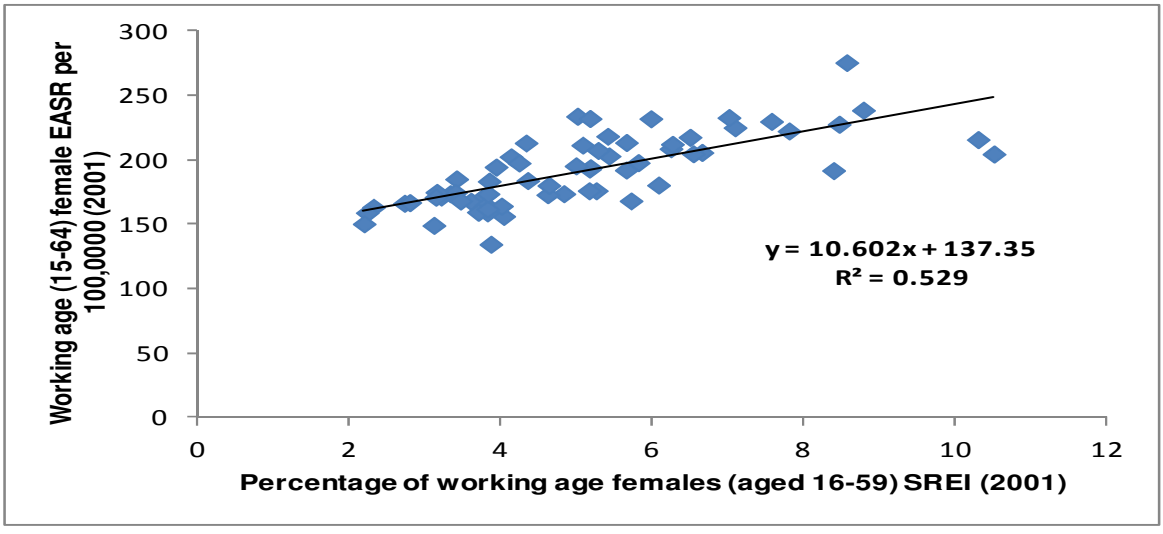


Figure 4.42: Association between female working-age (15-64) European Direct Age Standardised Mortality Rates (EASR) and female working-age (16-59/64) SREI, British counties: 1981, 1991 and 2001







4.5.4 Summary

As with the other explanations for SREI considered in this chapter, measures of health and well-being vary across space. Differences in employment rates for those with a work-limiting disability and working-age mortality are quite stark between economic clusters and more so at county level. Scottish areas (and Strathclyde in particular) may have an additional burden of ill-health to overcome, even compared to other urban areas, before SREI can be satisfactorily addressed. In a similar way to workforce skills, all five clusters saw improvements in working-age health (as measured by declining premature mortality) between 1981 and 2001 – but geographical inequalities in death failed to close. The strengthening association between premature mortality and SREI for women and the consistent strength of association between premature mortality and SREI for men underlines this point. Health inequalities did not disappear in the period under observation. It is entirely possible that they simply manifested themselves in a new way, including through sickness-related economic inactivity.

4.6 Multivariate regression

4.6.1 Repeat cross-section

4.6.1.1 Methods

It is possible to take the bivariate analysis outlined in sections 4.2-4.5 a stage further, and conduct some simple multivariate analyses. By considering the impact of independent variables together (rather than in isolation) upon our dependent variable, this approach offers the potential to see more clearly which factors are more important in explaining variation in SREI, after controlling for other variables. In addition, it may demonstrate that relationships which appear significant in bivariate analyses are actually non-significant once other factors have been taken into account. Analyses was carried out for men and women separately, for three time periods (1981, 1991 and 2001), giving six cross-sectional models in all. In line with the approach shown so far in this chapter, the aim was to test the association between key factors (labour market demand, skills, health and the generosity of national benefits relative to local wages) and sickness-related economic inactivity. The relevant variables were:

- SKILL = percentage of men (women) with degree level qualifications
- EASR=European Age-Standardised mortality Rate per 100,000 for men (women) aged 16-59/64
- JD=Jobs density in each country for men (women) aged 16-59/64
- RR=Value of IB as a ratio of average earnings for a full-time man aged 21+/women aged 18+, before housing costs

The unit of geography chosen was the county, to maximise the number of observations for each cross-sectional model.

As a preliminary step, those cases for which data was missing were omitted from analysis. This was due to a lack of earnings data for all counties at all three points in time, which did not allow local replacement ratios to be calculated. For men, this

reduced the number of observations in each Census year to 57 while for women, the number of observations dropped to 55 per year. The counties omitted were – with the exception of South Glamorgan for women and Warwickshire for men – predominantly rural with smaller, dispersed populations, so their exclusion is unlikely to have a substantive impact on the results.

The second step was to check for evidence of non-normality for the dependent variable, SREI, as this could lead to heteroskedascity. The histograms, probability plots and the skew and kurtosis of the dependent variable (SREI) were examined for all three periods, for men and women separately. This provided some evidence of a departure from symmetry (a skewness value more than twice its standard error) in all three time points for both sexes and evidence of positive kurtosis for men in 1981 and both sexes in 1991. As a response to this risk of heteroskedascity, the dependent variable was transformed to its log (L_SREI) for both sexes and all three time points (to allow comparability). This produced a less skewed and more normal distribution.

Next, the relationships between the independent variables were examined for all three time points and for men and women separately, for evidence of multicollinearity. If the independent variables are highly correlated with each other, this is likely to increase the standard errors and the degree of imprecision attached to the relevant coefficients, making it harder to discern the true relationships (Wonnacott and Wonnacott, 1990: 503-4). As a guiding strategy, correlations between variables were classified as weak (corr < 0.40), moderate (cor=0.40-0.59) or strong (corr=0.60).

This analysis confirmed that the four independent variables were correlated with each other, but in most cases the association was moderate or weak. However, in four cases – male skills and health in 1991, male skills and the local replacement ratio in 1991, female

skills and the female replacement ratio in 1991 and female skills and the replacement ratio in 2001 – the correlation was strong. The consistent and high correlation between skills and the replacement ratio, in particular, suggested that these were closely interrelated: the most plausible link being higher skills increasing local wages and thus reducing the value of the local replacement ratio. It is likely then that the replacement ratio variable reflects not only the incentive effects of benefits/wages but also partly reflects the skills of the local workforce. As a result, the skills variable was dropped but caution should be taken in interpreting the results as the replacement ratio variable reflects a mixture of earning relative to benefits but also workforce skills (with higher skills associated with higher wages and therefore lower local replacement ratios).

The fourth step was to produce scatter-plots for the transformed independent variable (L_SREI) and the four independent variables, to check for consistent, linear associations, since linear regression assumes a linear relationship between dependent and independent variables. There was little evidence of any significant departing from the linear and certainly no consistent non-linear associations for any of the variables over all three time periods, Independent variables were left untransformed.

4.6.1.2 Results

Table 4.6a shows the association between the explanatory variables and male L_SREI in 1981, 1991 and 2001. The figures shown in the first column beneath each year are the *unstandardised* coefficients, followed by White and MacKinnon's robust standard errors; the second column shows the significance of each variable. The table shows that controlling for other factors, health and the replacement ratio (the latter also reflecting skills) were significantly associated with the geographical variation in the log of male SREI in all three years. However, male labour market demand, which was not significant

in 1981 or 1991, had become so by 2001. The coefficient signs are positive for the health and replacement ratio variables, meaning that the association with the log of male SREI is positive for these measures: male SREI is higher where health is poorer and local earnings are lower. The negative sign for the labour market demand variable means that male SREI is higher where jobs density is lower. As noted above, we can also see the replacement ratio as a proxy for low skills, suggesting that higher skills will lower SREI.

Table 4.6a: Repeat cross-section multivariate models for male L_SREI: 1981, 1991 and 2001

	1981		1991		2001	
	Unstandardised Coefficients	Sig.	Unstandardised Coefficients	Sig.	Unstandardised Coefficients	Sig.
Constant	-1.796 (0.709)	0.01	-1.477 (0.618)	0.02	0.874 (0.705)	0.22
JDM	-0.764 (0.548)	0.17	-0.634 (0.632)	0.13	-1.951 (0.481)	0.00
EASRM	0.004 (0.001)	0.00	0.006 (0.001)	0.00	0.004 (0.001)	0.00
RRM	4.303 (1.333)	0.00	5.095 (1.348)	0.00	4.549 (1.756)	0.01
Adjusted R square	0.57		0.68		0.81	
Number of obs.	57		57		57	

Note: standard errors and sig. levels derived using White and MacKinnon's method.

Figure 4.43 presents data for the *standardised* coefficients in graphical form. Standardising coefficients in this way allows us to compare more directly the relative contribution of each explanatory variable and how they changed over time. It shows that health was the most important variable in explaining variation in the log of male SREI across the counties at all three time points, but that its relative importance declined slightly in the 1980s and 1990s. The local replacement ratio was of moderate importance

in explaining geographical variation in SREI in all three time points, and its relative contribution increased very slightly in the 1980s and again in the 1990s. Finally, male labour market demand explained little of the variation in male SREI in 1981 and 1991 (after controlling for health and local earnings relative to IB) but increased in relative importance between 1991 and 2001.

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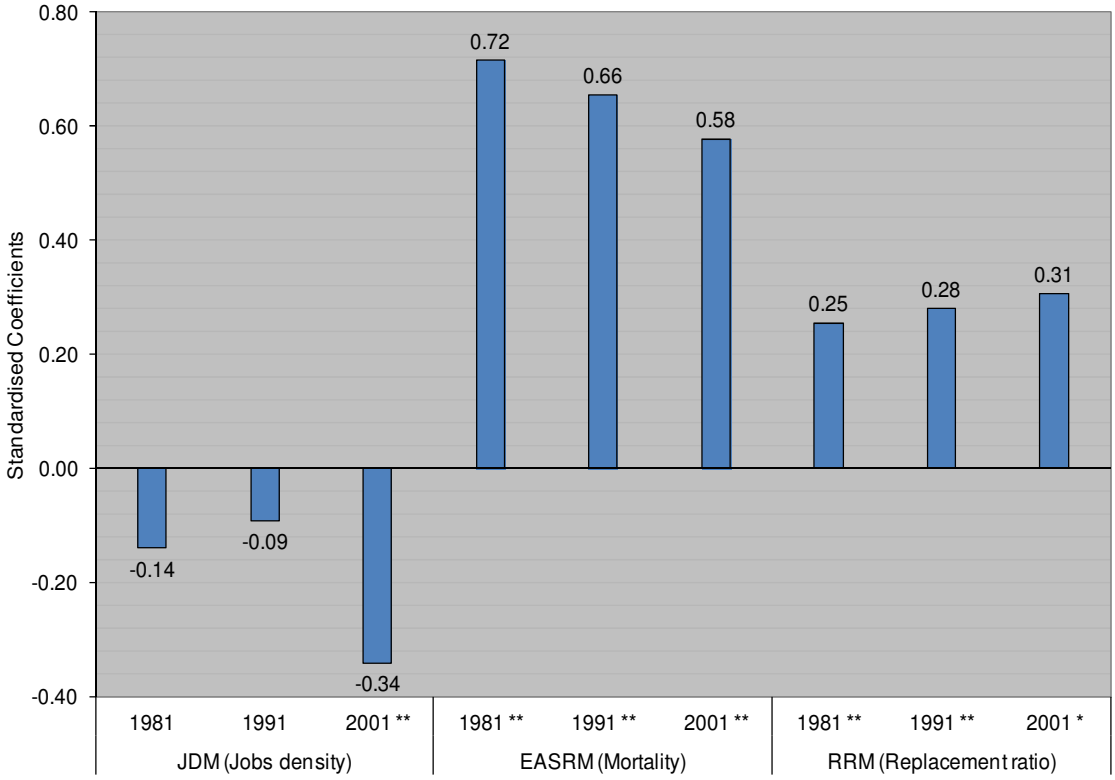
Figure 4.43: Standardised coefficients for explanatory factors in male L_SREI (multivariate model): 1981, 1991 and 2001



Note: ** significant at $p < 0.01$ * significant at $p < 0.05$.

Repeating the process for women showed a slightly different picture. Once again, the skills variable was dropped for analysis because it switched signs in 2001. Its exclusion

had a negligible impact on the model fit and in any case, it was not significant when included alongside the other three variables at any of the time points.

Table 4.6b shows the association between the explanatory variables and female L_SREI in 1981, 1991 and 2001. For women, in both 1981 and 1991, only the health variable was significantly associated with variation in the log of female SREI. However, by 2001, this had been joined by female jobs density and the local female replacement ratio: neither of these was significant in 1981 or 1991 in the multivariate model. The female replacement ratio was also less significant in 2001 ($p=0.04$) than the health and labour market demand variables (both $p<0.01$). Signs were as expected, with counties with poorer health (all three time points), higher replacement ratios and lower jobs densities (2001 only) having higher rates of female SREI.

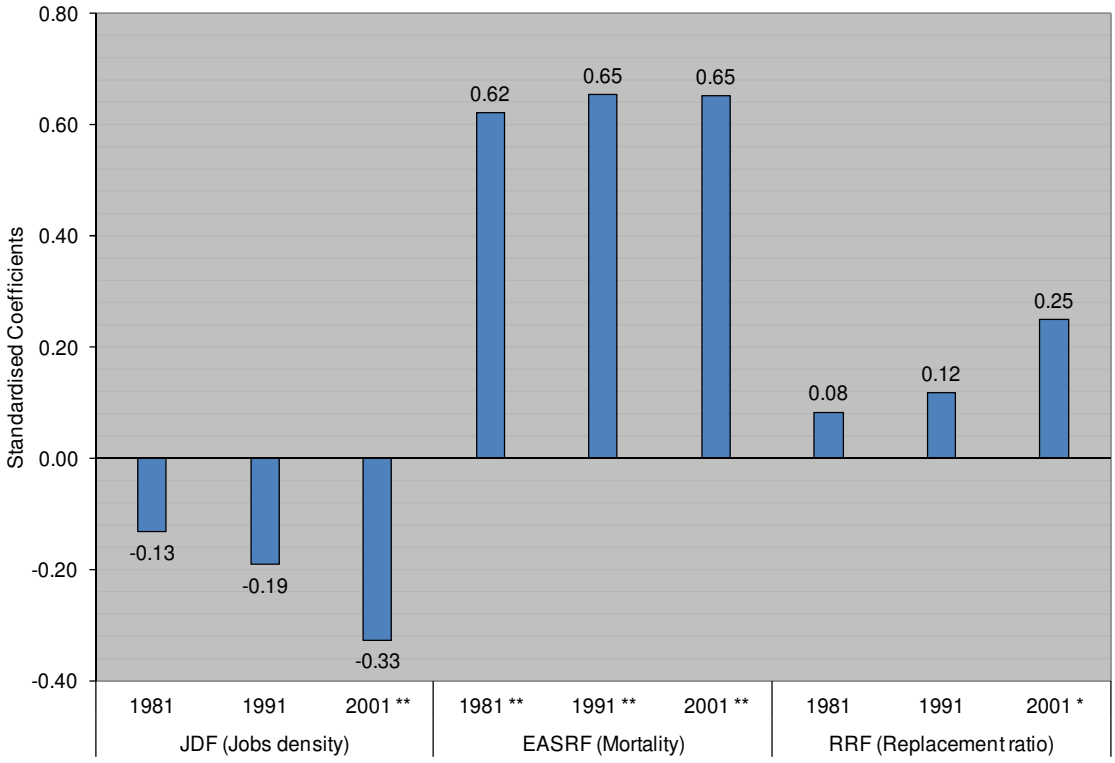
Table 4.6b: Repeat cross-section multivariate models for female L_SREI: 1981, 1991 and 2001

	1981		1991		2001	
	Unstandardised Coefficients	Sig.	Unstandardised Coefficients	Sig.	Unstandardised Coefficients	Sig.
Constant	-0.951 (0.968)	0.33	-0.249 (0.948)	0.79	0.646 (0.718)	0.37
JDF	-0.742 (0.702)	0.29	-1.755 (1.159)	0.14	-2.484 (0.613)	0.00
EASRF	0.004 (0.001)	0.00	0.008 (0.001)	0.00	0.009 (0.001)	0.00
RRF	0.848 (1.569)	0.59	1.586 (1.176)	0.18	2.894 (1.339)	0.04
Adjusted R square	0.42		0.64		0.82	
Number of obs.	55		55		55	

Note: standard errors and sig. levels derived using White and MacKinnon's method.

Figure 4.44 shows the *standardised* coefficients for the explanatory variables over time. As with men, health was the most important factor in explaining the distribution of SREI across the counties at all three points in time – but for women, there is less evidence of a decline in the relative importance of health in explaining variation in SREI over time and it may have actually increased very slightly in the 1980s. Both labour market demand and the replacement ratio increased their explanatory power in the 1990s, but the former was relatively more important than the replacement ratio earnings relative to IB (including skills) in 'explaining' female SREI in 2001.

Figure 4.44: Standardised coefficients for explanatory factors in female L_SREI (multivariate model): 1981, 1991 and 2001



Note: ** significant at $p < 0.01$ * significant at $p < 0.05$.

4.6.2 First difference

4.6.2.1 Methods

Taking the first difference between time points can be an effective way of controlling for unobserved, time-constant heterogeneity (for example, variation in location of counties within Britain), though it should be noted that differencing cannot control for unobserved, time-varying variables (e.g. a deterioration in the work ethic concentrated in certain geographies). Here the approach was first to calculate a new dependent variable, SREI8101, showing the percentage point change in SREI between 1981 and 2001, for men and women. Four new explanatory variables were also computed, showing the change in the jobs ratio, growth in workforce qualifications, the absolute reduction in the EASR and the fall in the replacement ratio, again for men and women separately, between 1981 and 2001. Consistent with the cross-section results (shown above) this produced 57 observations for men and 55 for women.

Checks for evidence of non-normality in the dependent variable provided evidence of a departure from symmetry (a skewness value more than twice its standard error) and some evidence of kurtosis for both genders. As a response to this risk of hetereskedascity, the dependent variable was transformed to its log (L_SREI8101) for both sexes. This produced a less skewed and more normal distribution, especially for women. When correlations between the independent variables were examined, significant but weak (<0.40) correlations were found between the male reduction in mortality and both the change in job density and the change in the replacement ratio. A moderate correlation (-0.49) was found between the change in job density and the change in the replacement ratio. For women, significant, weak correlations (<0.40) were found between growth in workforce skills and both female reduction in mortality and the female replacement ratio. Scatter plots were of the relationships between the independent variables and SREI were also examined to see if relationships were broadly linear. No significant departures were observed, so the independent variables were not transformed.

4.6.2.2 Results

The results that follow adopt the presentational approach used for the cross-section work. The tables show the constant and *unstandardised* coefficients for each independent variable together with the standard errors and significance levels derived using the White and MacKinnon method. The charts show the *standardised* coefficients to allow some judgement to be made of the relative 'importance' of each variable.

Table 4.6c shows results for men. The first column (Model 1) includes all four independent variables. It 'explains' just over half of the variation in growth in the log of growth in male SREI between 1981 and 2001. Only the change in labour market demand and reduction in mortality variable are significant, however. The negative sign for the change in labour market demand variable indicates that counties with the *weakest* growth in demand for male labour had the *strongest* growth in male SREI. The significant (p=0.03), negatively signed association with change in male mortality suggests that counties with the largest reduction in mortality also saw the largest increases in male SREI. Dropping the independent variable most highly correlated with the others (the replacement ratio) reduces the level of multicollinearity with little loss of explanatory power (Model 2). The reduction in mortality and change in jobs density remain significant, while the change in male workforce skills remains insignificant.

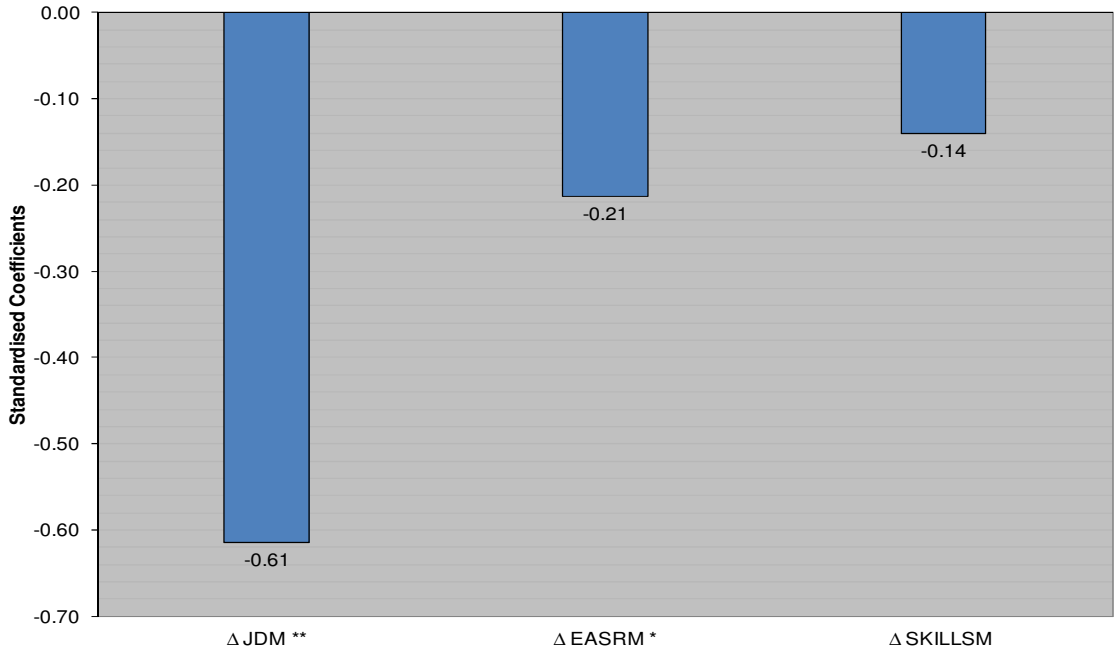
Figure 4.45 shows the *standardised* coefficients for Model 2 in graphical form. This shows much more clearly that, controlling for other factors, the change in male jobs density had the strongest effect on the change in the log of male SREI. The results for male mortality may be thought counter-intuitive at first sight, but does suggest some kind of legacy effect, since those counties experiencing the largest improvements were likely to have the poorest health (highest mortality) to begin with.

Table 4.6c: First difference multivariate models for Δ male L_SREI: 1981-01

	Model 1		Model 2	
	Unstandardised Coeff.	Sig.	Unstandardised Coeff.	Sig.
Constant	1.499 (0.413)	0.01	1.153 (0.297)	0.00
Δ JDM	-4.259 (1.052)	0.00	-4.612 (1.121)	0.00
Δ EASRM	-0.002 (0.001)	0.03	-0.003 (0.001)	0.02
Δ SKILLSM	-0.017 (0.017)	0.33	-0.020 (0.018)	0.27
Δ RRM	2.700 (1.870)	0.15		
Adjusted R square	0.54		0.54	
Number of obs.	57		57	

Note: standard errors (in parenthesis) and sig. levels derived using White and MacKinnon's method.

Figure 4.45: Standardised coefficients for explanatory factors in Δ male L_SREI 1981-01 (Model 2)



Note: ** significant at p < 0.01 * significant at p < 0.05.

A different picture emerges for women (Table 4.6d). Model 1 shows that, controlling for other variables, changes in female jobs density and female skills are significant factors in 'explaining' growth in the log of female SREI. The model 'explains' around half of the change in the dependent variable. Unfortunately it also suffers from a serious problem with multicollinearity (several eigenvalues close to zero and a condition index greater than 30). Dropping the least significant variable did not reduce the goodness of fit (Model 2) but did reduce the degree of multicollinearity. It also makes the female health variable significant at $p < 0.05$. Overall, counties with weaker growth in labour market opportunities, faster falls in mortality and weaker growth in workforce skills saw stronger growth in female SREI.

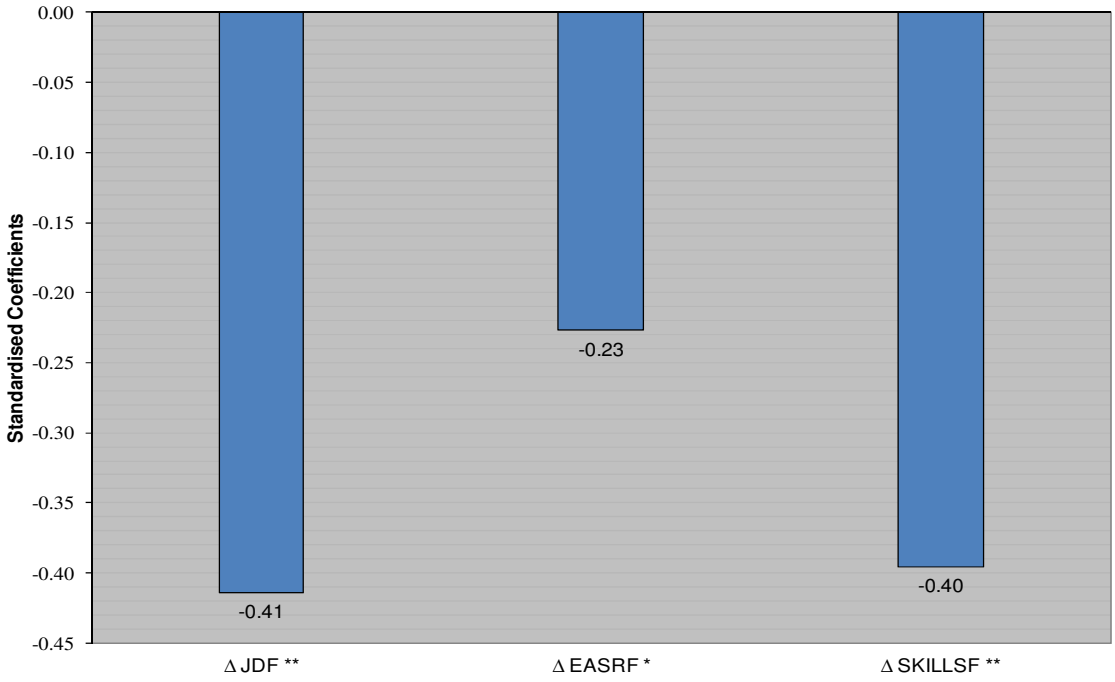
Figure 4.46 shows the standardised coefficients for the independent variables in Model 2. As with men that the strongest independent variable in the model shown was labour market demand, but for women in this model, growth in the skills of the workforce were almost as strongly associated with change in the log of SREI. The negative sign shows that those counties with the weakest growth in the percentage of their female workforce with degrees saw the strongest growth in female SREI. Changes in health played a subordinate, though still significant, role.

Table 4.6d: First difference multivariate models for Δ f*emale L_SREI: 1981-01*

	Model 1		Model 2	
	Unstandardised Coeff.	Sig.	Unstandardised Coeff.	Sig.
Constant	9.451 (2.474)	0.00	8.004 (1.336)	0.00
Δ JDF	-17.945 (3.956)	0.00	-17.877 (3.942)	0.00
Δ EASRF	-0.017 (0.009)	0.06	-0.019 (0.009)	0.04
Δ SKILLSF	-0.226 (0.053)	0.00	-0.238 (0.046)	0.00
Δ RRF	6.286 (9.512)	0.51		
Adjusted R square	0.48		0.48	
Number of obs.	55		55	

Note: standard errors (in parenthesis) and sig. levels derived using White and MacKinnon's method.

Figure 4.46: Standardised coefficients for explanatory factors in Δ *female L_SREI 1981-01 (Model 2)*



Note: ** significant at $p < 0.01$ * significant at $p < 0.05$.

4.6.3 Panel regression

4.6.3.1 Methods

The final approach to multivariate analysis was to pool all available cases in a panel regression. Increasing the number of observations improves the chances that any findings can be generalised beyond this small sample. This approach produced 171 cases (3*57) for men and 165 (3*55) for women. However, since the same counties are being observed at three points in time, a straightforward OLS regression would violate the assumption of independence of its observations and could produce misleading results. The MIXED Procedure in SPSS was used to adjust for this, with Census year being used as a repeated measure and county as the unit of observation. Before beginning the analysis, the dependent variable (SREI) was logged for both men and women, producing a more normal distribution. After checking the association between independent variables, the skill variable was dropped from analysis because of its high level of correlation with other variables.

Dummy variables were also calculated for cluster of residence and time. Based on the analysis previously undertaken, these were simplified into two dummies:

- OIA: this equalled 0 if the county of residence was within Prospering Britain, Greater London or Rural and Coastal Britain and 1 if it was in the Conurbations or Coalfields & Industrial Legacy Areas
- Y2001: this equalled 0 if the year of observation was 1981 or 1991 and 1 if it was 2001.

Interaction terms were also created from these, allowing us to test whether the association between the independent variables at L_SREI varied by geography or time. Following Seltman (2011), Schwarz's Bayesian Criterion (BIC) was used as a guide to indicate the 'goodness of fit' for each model.

4.6.3.2 Results

In the tables that follow, results show the unstandardised coefficient, standard error and t-statistic as reported. The first model for men (*Table 4.6e*) shows that after controlling for other factors, the time, labour market demand, health and the replacement ratio variables were all significantly associated with the distribution of male SREI. Signs were as expected: male SREI was higher where the jobs density (labour market demand) was weaker, where mortality was higher, and where the replacement ratio was higher (and local wages lower). For this model and sample, the t-ratios suggest that after time, health was the most important variable in determining male SREI, followed by the replacement ratio and jobs density.

The second model (*Table 4.6f*) was built by including all the variables from Table 4.6d plus interaction terms for cluster of residence and year, then dropping out non-significant variables in order. Controlling for other factors, year, health and the replacement ratio were again significantly associated with the distribution of male SREI. (Note that male jobs density without interaction was dropped from this model as non-significant). Labour market demand interacts with the time variable, suggesting that it was significantly associated with SREI in later time periods only. There are also interaction effects between cluster of residence, health and the replacement ratio, and male SREI. The negative sign for EASRM * OIA indicates that residence in Conurbations or Coalfields & Industrial Legacy Areas reduces the (relative) contribution of a high mortality county to SREI compared with Prospering Britain, Greater London or Rural and Coastal Britain. Although mortality remains higher in Conurbations and Coalfields & Industrial Legacy Areas, poorer health is accompanied by other forces that are less relevant in driving SREI. This is confirmed by the positive sign for RR * OIA: higher replacement ratios have a stronger association with SREI in Conurbations or Coalfields & Industrial Legacy Areas compared to counties elsewhere.

Table 4.6e: Pooled multivariate model for male L_SREI: excluding interactions

	Estimate (Standard error in parenthesis)	t-statistic
Intercept	0.081 (0.35)	0.2
[year=1]	-2.326** (0.117)	-19.9
[year=2]	-0.743** (0.057)	-13.0
[year=3]¥		
JDM	-1.128** (0.294)	-3.8
EASRM	0.004** (0.00)	14.6
RRM	5.269** (0.811)	6.6
Schwarz's Bayesian Criterion (BIC)	13.561	
Number of obs.	171	

¥ Set to zero because it is redundant. * Significant at P <0.05 ** Significant at P < 0.01.

Table 4.6f: Pooled multivariate model for male L_SREI: <u>including</u> interactions

	Estimate (Standard error in parenthesis)	t-statistic
Intercept	0.377 (0.399)	0.9
[year=1]	-3.108** (0.300)	-10.4
[year=2]	-1.528** (0.304)	-5.0
[year=3]¥		
EASRM	0.004** (0.00)	8.7
RRM	5.065** (0.721)	7.0
EASRM * OIA	-0.0014* (0.001)	-2.5
RR * OIA	2.956** (0.846)	3.5
JDM * Y2001	-1.249** (0.419)	-2.9
Schwarz's Bayesian Criterion (BIC)	-10.789	
Number of obs.	171	

¥ Set to zero because it is redundant. * Significant at P <0.05 ** Significant at P < 0.01.

The process was repeated for women. The first model (*Table 4.6g*), excluding interactions, produces similar results to those already observed for men. Controlling for other factors, time and the three independent variables were all significantly associated with the distribution of SREI. The signs indicate that female SREI was higher in later years, where jobs density was weaker, mortality higher and the replacement ratio higher (i.e. where female earnings were lower). The t-ratios suggests that health was the most important factor in explaining the distribution of female SREI, followed by labour market demand and then the replacement ratio.

In terms of interactions, for women the most complete model with the lowest BIC included time interactions only (*Table 4.6h)*. Again, the three independent variables and time were all significantly associated with SREI. The interaction effects of EASRF * Y2001 suggest that for women, geographical inequalities in mortality became more important in explaining variation in SREI over time. There was also an interaction effect observed for JDF * Y2001, though this was less significant ($P< 0.10$).

Model 4.6g: Pooled multivariate model for female L_SREI, excluding interactions

	Estimate (Standard error in parenthesis)	t-statistic
Intercept	1.063 (0.414)	2.6
[year=1]	-2.657** (0.145)	-18.3
[year=2]	-0.996** (0.065)	-15.3
[year=3]¥		
JDF	-1.943 ** (0.418)	-4.6
EASRF	0.006** (0.001)	11.8
RRF	2.074* (0.661)	3.1
Schwarz's Bayesian Criterion (BIC)	-10.804	
Number of obs.	165	

¥ Set to zero because it is redundant. * Significant at P <0.05 ** Significant at P < 0.01.

Model 4.6h: Pooled multivariate model for female L_SREI, including cluster interactions

	Estimate (Standard error in parenthesis)	t-statistic
Intercept	0.957 (0.573)	1.7
[year=1]	-2.769** (0.599)	-4.6
[year=2]	-1.158 (0.589)	-1.9
[year=3]¥		
JDF	-1.260* (0.495)	-2.5
EASRF	0.005** (0.001)	9.5
RRF	2.212** (0.633)	3.5
JDF * Y2001	-1.403 (0.754)	-1.9
EASRF * Y2001	0.004** (0.001)	2.9
Schwarz's Bayesian Criterion (BIC)	-16.244	
Number of obs.	165	

¥ Set to zero because it is redundant. * Significant at P <0.05 ** Significant at P < 0.01.

4.6.4 Summary

Drawing together the findings from this multivariate analysis can provide clearer insights into the factors driving sickness-related economic inactivity in Britain. The results vary by gender.

For men, after controlling for other factors, there is evidence that labour market demand emerged as an important variable associated with the distribution of SREI in the 1990s, while the first difference work suggests it was the most plausible variable associated with the growth of SREI over time. Inequalities in health remained a very important factor in determining the geographical distribution of SREI – it was the strongest variable in the pooled and cross section models – with some evidence of a 'legacy effect' of higher mortality in places with higher levels of SREI growth. However, its *relative* role either remained flat or declined over time, suggesting that the increase in male SREI cannot be attributed to a worsening in health. The replacement ratio played a contextual, secondary role, having modest explanatory power, which increased only modestly over time. The correlation between the skills and replacement ratio variable suggests the latter reflected the interaction of qualifications, earnings and the benefits system. There is some evidence the impact of lower earnings (higher replacement ratios) was stronger in older industrial areas, a point which may provide avenues for future research.

For women, like men there is evidence to support the' hidden unemployment' thesis, through the impact of demand appears weaker than for men. The labour demand variable emerged as significantly associated with the distribution of female SREI in the 1990s, while the first difference suggests demand and workforce skills were the most important drivers of growth in female SREI and there is some evidence of a (less significant) interaction between time and female labour market demand on female SREI. Similar to

men, health was the most important factor in explaining the geographic distribution of female SREI. Although there was less of a 'legacy effect' of poor health, there is some evidence of a modest *increase* in the relative importance of female health inequalities driving SREI. The replacement ratio (which, like men, also reflects inequalities in workforce skills) for women also played a secondary role in explaining the distribution of SREI, but its influence was less than was the case than for men.

4.7 Conclusions

4.7.1 Main points

Before discussing the implications raised by the findings in this chapter the questions raised in the introduction should be introduced.

1. *How did sickness-related economic inactivity change over time in the British counties and 'clusters' of counties?*

SREI increased in all counties between 1981 and 2001 but the Conurbations and Coalmining & Industrial Legacy areas saw larger increases in SREI than those in Prospering or Rural and Coastal Britain. The 1980s saw more a pronounced growth in the rate of divergence than the 1990s. Consequently, the relative gap in rates of SREI between counties widened over time – and not just between those places with high and low rates in 1981, but also for those places with a similar economic heritage. For instance, Greater Manchester, Cleveland and Merseyside all had similar rates of working-age sickness-related economic inactivity (c. 2.5%) in 1981 but different rates (c. 8%, 9% and 10%) by 2001. Rates of working-age SREI in the Conurbations and Coalfields and Industrial Legacy areas were consistently above the British average (c.3% to c.8%) while Prospering Britain were consistently below average (c.1.5% to c.4%). Temporal trends in SREI Rural and Coastal Britain mirrored the British average. Finally, Greater London's trajectory for sickness-related economic inactivity was closer to Prospering Britain.

2. *What factors were associated with local variation in SREI across geographies?*

Levels of sickness-related economic inactivity were associated with measures of local labour market demand, employability and health. Consistently, health was the strongest factor in explaining the distribution of SREI for both genders. Labour market demand was also important, with enough evidence to reject the null hypothesis of no association between demand and SREI. However, this effect seems to manifest at the county level, reflecting wider differences in demand *within* economic clusters than between them. Turning to the benefits system, there is an interaction between local conditions and national welfare regime, with the Conurbations, Coalfields and Industrial Legacy areas and Greater London exhibiting higher rates of 'cycling' onto other benefits and reduced likelihood of moving into employment.

These factors do not exist in isolation but appear to interact: for example, places with lower levels of overall demand also have poorer health, lower wages (and thus higher IB replacement ratios) and lower skills – and in older industrial Britain, there is a particular shortage of employment opportunities in elementary occupations and skilled manual occupations, where current IB claimants have a closer fit based on their job histories. This is reaffirmed by the cross-section analysis and (for men only) the panel regression showing an association between residence in the Conurbations, Coalfields and Industrial Legacy areas and the local replacement ratio, and higher rates of SREI.

3. *Did these associated factors change over time?*

On the available evidence, factors associated with SREI did change over time, but the nature of the change varied by gender. Controlling for other factors, for both genders, labour market demand emerged as a significant and important factor in explaining the distribution of SREI in the 1990s, strengthening over time, and is the most plausible factor (in terms of strength and direction of change) in explaining the growth of SREI. Objective health was consistently associated with SREI, though its relative importance may have declined slightly over time for men. Evidence on the impact of changes to the benefits regimes is more mixed. No evidence was found of an association between levels of permanent sickness and Incapacity Benefits generosity measured in real terms or relative to national earnings ('replacement ratio'). Some evidence was found of a growing association between *local* 'replacement ratios' and SREI over time, though the association is more compelling for men than women. There is some tentative evidence that slower growth of earnings in the Conurbations and Coalfields and Industrial Legacy areas, perhaps coupled with tighter rules for unemployment benefits, may also have contributed to the growth of the IB caseload in weaker labour markets.

4.7.2 Discussion

This chapter has made two contributions to understanding the changing distribution of sickness-related economic inactivity in Britain over time. First, it has presented unique localised estimates of working-age SREI, spanning two decades and covering 64 British counties. Calculating these figures provide a novel picture of how this issue evolved through time at a local level. Second, it has made an initial attempt to assess whether factors associated with local variation in SREI changed over time.

Several implications flow from this analysis. Contrary to the Treasury/DWP view, this chapter suggests that variation in sickness-related economic inactivity cannot be adequately explained by 'supply-side' factors alone. As an illustration, someone with no qualifications living in Strathclyde was 7 percentage points less likely to be in employment than their counterpart in Gloucestershire; while someone with health problems living in Merseyside was 16 percentage points less likely to be in employment than their contemporary in Hampshire. Moreover, jobs and vacancies tend to cluster in areas with lower levels of sickness-related economic inactivity, undermining the official view that demand was not an issue. This pattern holds true whether considering filled jobs or vacancies and was a relevant factor as late as 2005/06. It is also consistent with data presented at a NUTS II level investigating the association between working-age Incapacity Benefit claimants and jobs density and with a more recent assessment of competition for vacancies in local labour markets (Beatty and Fothergill, 2005; National Audit Office, 2007).

Furthermore, geography became increasingly important in determining the risk of labour market detachment related to sickness-related economic inactivity. Between 1981 and 2001, the importance of differences in jobs density as a variable in accounting for working-age sickness-related economic inactivity actually increased. If national or even regional trends are considered, this might seem counter-intuitive. Both the 1981 and 1991 Censuses coincided with severe national recessions, while the 2001 survey took place in more benign national conditions. However, the uneven spatial distribution of employment growth meant that even national growth, the resurgence of the cities and piecemeal regeneration were insufficient to fully restore the employment base in the Conurbations and Coalfields and Industrial Legacy areas by the end of the 1990s. By contrast, other parts of Britain (outside of Greater London) continued to benefit from an urban-rural shift and favourable historical circumstances (Rowthorn, 2000). Monitoring social and economic change at a local level is a necessary complement to understanding

developments at a national and regional level, and may have to be taken into account if national policy changes are to be effective.

The dominant view remains that encouraging potential workers to compete for employment opportunities will ensure that supply creates its own demand (Leunig and Swaffield, 2007). While broadly true – chiefly because filling vacancies will create a multiplier effect as people's income and spending increases – in practice spatial mismatch and skills mismatch limit the potential for increased search intensity to benefit the most disadvantaged. Commuting patterns except for the most highly skilled remain constrained: and as shown above, there is much more competition for entry level jobs and skilled manual opportunities (which those affected by sickness-related economic inactivity are likely to favour).

Complementary to these demand deficiencies are supply-side explanations, which also remain very important. In a British context, scope for addressing both misdirected demand *and* issues of low employability and health is supported by Richard Berthoud's work on non-employment. This found that the risk factors for non-employment were additive, so that someone with no qualifications living in a 'low demand' area would face a higher chance of non-employment than someone with no qualifications living in a 'high demand' area (Berthoud, 2003). Most straightforward is the association between health measures (whether objective or subjective) and sickness-related economic inactivity, though these inequalities appeared to affect men and women differently. Without restating the arguments offered in the literature review, substantial spatial inequalities in health remain present in Britain, and for some groups (notably young adults) actually increased over time (Leyland, 2004; Dorling, 1997). Skills too emerged as a factor, with again a 'gender divide', with the association between female sickness-related economic inactivity and skills increasing steadily over time. This provide some tentative evidence for the idea that growing female participation the labour market exposed low-skilled

women to some of the same risks that resulted in low-skilled men moving into sickness-related economic inactivity (Beatty et al, 2009b).

Arguments proposing a straightforward link between increased generosity of Incapacity Benefits and SREI are difficult to sustain. IB was worth more in weaker labour markets because of lower earnings, which are determined by overall demand and workforce skills. Arguments favouring conditionality as a root cause may be more credible, but are likely to relate as much to the introduction of ever more punitive rules around unemployment benefits as to lax rules or fraudulent claiming for IB claimants. There are at least two mechanisms by which this might happen. First, less generous welfare regimes can have a debilitating impact on the health of the healthy unemployed, so that they end up qualifying for IB (Bambra and Eikemo, 2009). Second, the 'hidden sick' among the unemployed in depressed local labour markets may make a conscious decision to avoid the hassle of new rules and transfer that way (Yeandle and MacMillan, 2003). Finally, it should be remembered that the main contributor to rising Incapacity Benefits caseloads over the last 25 years has been reduced likelihood of leaving, not rising inflows. Ever more stringent benefit rules may well reduce the caseload for a particular benefit, but unless attention is paid to differences in employment opportunities, skills and health they are unlikely to get to grips with the fundamentals (Buck et al, 2006). It is also possible that growing unemployment and disability rolls prompted a struggle between a 'social' and 'medical' model of disability within the IB benefit system.

In highlighting the importance of space in understanding variation and trends in sickness-related economic inactivity, it is worth noting two counties that do not quite fit neatly into the narrative. Greater London remains an outlier, with special labour market problems of its own albeit those than manifest as open unemployment. These may reflect recruitment patterns and skills mismatch, as better health profile in the Capital than might be expected given its high levels of deprivation (Whynes, 2009). Strathclyde too remains a

special case: the region's consistently worse health, and (on the basis of 2004 data) poorer outcomes for benefit leavers contrasts with areas with a similar heritage, such as Merseyside, which if anything had a more traumatic economic adjustment between 1981 and 2001. More research on Greater London and the West of Scotland might shed light on unresolved questions in these places.

A further limitation is that the time trends analysis stops in 2001. There is good evidence that (at least prior to the onset of the current recession), employment prospects in the Conurbations and Older Industrial Britain continued to improve after this date (Coutts et al, 2007). Some commentators have argued that it was this, as much as the roll-out of the Pathways to Work initiative that contributed to a reduction in working-age sickness and disability (Webster et al, 2010). However, those affected by sickness-related economic inactivity in 2007 may also be more distant from the labour market than their contemporaries in 2001, facing more entrenched health problems (Beatty and Fothergill, 2007).

Overall, a number of conclusions might be drawn from this chapter. First, local variation and change over time in working-age sickness-related economic inactivity is likely to reflect multiple factors. Second, analysis of sickness-related economic inactivity can be improved by examining change at a fine-grain level, looking at individual counties but also counties clustered by historical economic functions. Third, the reasons for variation in sickness-related economic inactivity at a county level changed through time: away from merely reflecting health factors towards a mixture of labour market context and health inequalities. Thus there is a good case to understand how supply and demand-side factors interact at a local level to determine the changing composition of sickness-related economic inactivity. In the next chapter, Labour Markets Accounts are assembled to consider this in more detail.

Chapter 5 Local labour market dynamics and sickness-related economic inactivity

5.1 Introduction

5.1.1 Background

Local labour markets are fluid and organic: constantly adapting – for good or ill – to new economic circumstances, their paths shaped by past events. The preceding chapter described how sickness-related economic inactivity (SREI) changed in the British counties and economic clusters between 1981 and 2001, but its exploration of the causes of this phenomenon was more limited, using data from the most recent past or a few simple explanatory factors at three points in time. Improved understanding of sickness-related economic inactivity requires a better grasp of the dynamics of labour market change and the adjustment processes at work, in terms of job creation and destruction, population change and flows in and out of unemployment and economic inactivity. Recognising these dynamics, this chapter will use the prism of labour market accounts to unpick the different components that accompanied the growth of sickness-related economic inactivity (SREI) in the British counties. It aims to answer the following questions:

- How did labour markets in selected economic clusters and counties change between 1981 and 2001 and what were the implications for SREI?
- To what extent had Conurbations and Industrial Legacy areas recovered from structural employment change by 2001?
- Outside of Greater London and Rural & Coastal Britain, which components of the labour market accounts were most strongly associated with withdrawal into SREI?

Labour market 'accounts' are constructed to show how changes in employment, commuting, demographics and economic inactivity (including sickness-related economic inactivity) translated into changes in unemployment across three local labour market clusters. The three clusters examined include the 24 counties of Prospering Britain, the seven counties of the Conurbations and three Industrial Legacy counties. Results are also disaggregated by gender and time period.

The chapter also includes an analysis of economic regeneration across the seven conurbations and three industrial legacy counties[21], to examine to what extent these local areas recovered from their historic position and potential links with withdrawal into sickness-related economic inactivity. Many parts of Britain (especially the North East of England, West Midlands, West of Scotland and Merseyside) had already experienced heavy employment losses in the 1970s (Owen, Gillespie and Coombes, 1984). Britain as a whole also experienced a very deep recession in the early 1980s, which bit still deeper at what remained of industrial employment across the county. A wider view of labour market adaption can be gained by taking these historical circumstances into account. Regression analysis is also used to identify the relative importance of job destruction, weak employment growth, demographic change and displacement by commuters or women returners in driving this phenomenon, across the 43 counties outside of Rural & Coastal Britain and Greater London.

5.1.2 Methods and data sources used

In terms of the geographies chosen, the chapter focuses on three of the five 'clusters' of counties: the Coalfields and Industrial Legacy areas, Conurbations and Prospering Britain. These clusters were chosen for analysis because they represent a spectrum of labour market adjustment and trends in SREI across Britain. Given their more industrial

[21] Cleveland, Lancashire and Tayside. See Chapter 3 for a full list of the counties in each cluster.

character and the larger withdrawal into SREI, there is a clear case to include the first two clusters. Including results for 'Prospering Britain' also seems logical, as a counterpoint to the Conurbations. Like the Conurbations, Prospering Britain is home to a significant share of the British workforce and employment opportunities, but its trajectory has been rather different, as noted in Chapter 4 and elsewhere (Dorling and Thomas, 2004; Coutts, Glyn and Rowthorn, 2007).

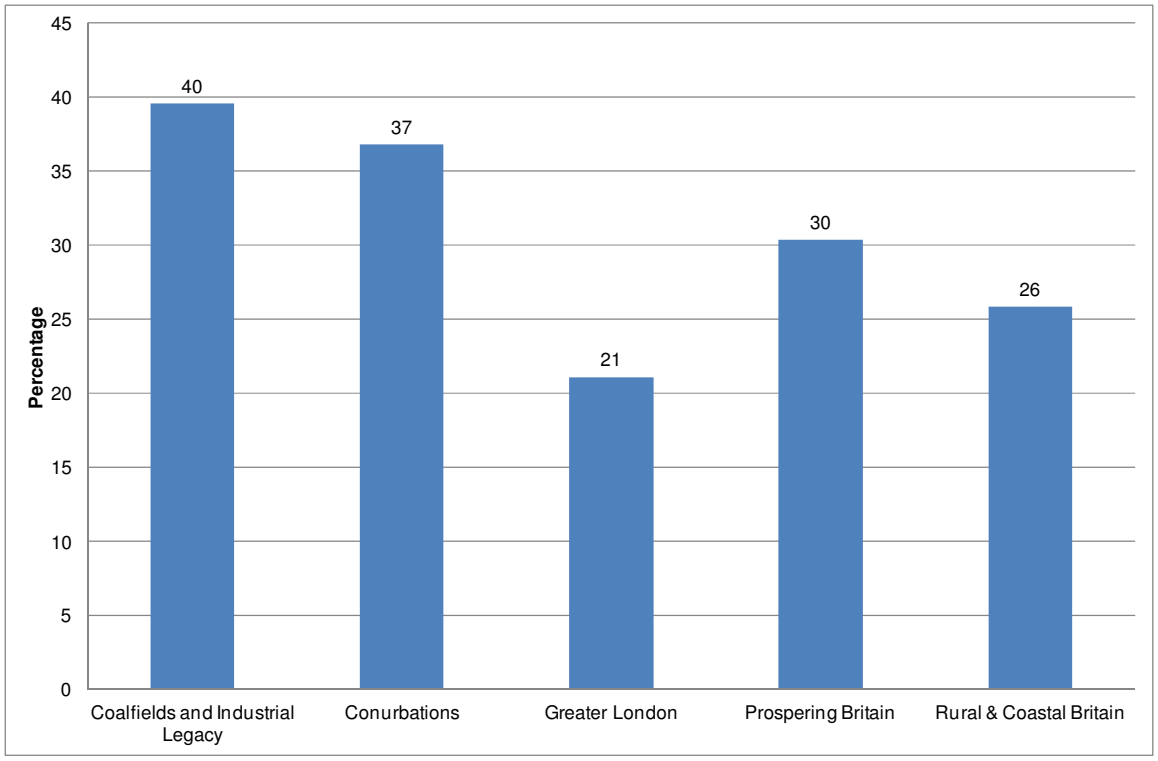
Given the extensive work already published on the decline and partial rehabilitation of the English and Welsh coalfields (Bennett, Hudson and Beynon, 2000; Gore, Fothergill and Powell, 2007; Department for Communities and Local Government, 2007; Beatty, Fothergill and Powell, 2007), the nine 'Coalfield counties'[22] are not considered in detail in this first section. While there may be some overlap between coalfields analysis and the chosen counties, it is likely to be minimal and confined to South Yorkshire and (to a lesser extent) parts of Merseyside and Strathclyde. They are however included in the regression analysis presented in section 5.2.5.

Greater London and Rural and Coastal Britain are excluded entirely because of their unique character and (in the later case) to avoid duplication. Both clusters were less reliant on industrial employment at the start of this period. Prospering Britain's proportion of jobs in industry, by contrast, was close to the British average of 31% (Figure 5.1). In Greater London's case, its labour market indicators are ambiguous: a high jobs density but high U:V ratio, better than expected health but worse outcomes for benefit leavers, and relatively high recorded unemployment. Untangling the labour market strengths and weaknesses of Greater London is outside the scope of this thesis. Finally, partial analysis of the counties of Coastal and Rural Britain (including seaside

[22] Central, Derbyshire, Durham, Fife, Mid-Glamorgan-Gwent, Northumberland, Nottinghamshire, Staffordshire and West Glamorgan.

towns and Barrow-in-Furness) has already been published (Beatty and Fothergill, 2000; Beatty and Fothergill, 2004), reducing the scope to extend knowledge of these places.

Figure 5.1: Percentage of workplace employment in industry: economic clusters, Census Day 1981



Source: 1981 Census (Special Workplace Statistics).

The next section uses a modified LMA framework on the clusters to do just that.

5.2 Results

5.2.1 Deindustrialisation and labour market dynamics in the clusters

In Chapters 2 and 4, the role of labour market demand was touched upon as a partial explanation for the changing composition of sickness-related economic inactivity in Britain between 1981 and 2001. Lying behind this was the loss of industrial employment and the adjustment (or lack of adjustment) in response to this at local level. Deindustrialisation started to affect the Western industrial economies in the 1960s, though the pace and severity of industrial job losses took off following the collapse of the Bretton Woods system and the first oil shock of the 1970s. British regions and cities were among the worst hit in Europe (Judt, 2005: 458-459; Wabe, 1986), and this process continued into the subsequent two decades.

As Rowthorn (2000) recounts, the 1980s and 1990s saw deindustrialisation in Britain on a scale more extreme than that experienced by other OECD members. If British manufacturing had merely kept pace with the EU over this period, he estimates that there would have been 700,000 more jobs in the sector in 1999 (Rowthorn, 2000: 4,10). As a whole, 2.7 million industrial jobs were lost in Britain in a twenty year period (Census Special Workplace Statistics). The less skilled and older men in particular were displaced and many found their way to sickness-related economic inactivity. More controversially, local labour markets took a long time to recover. Persistent weak demand in many areas of the country may then have sustained and reproduced high levels of 'hidden unemployment', including among new labour market entrants (Beatty and Fothergill, 2005).

Here, a specially adapted version of labour market accounts methodology is applied to explore this idea. First, it splits the change in labour force participation into two parts (the withdrawal into sickness-related economic inactivity (SREI) and exits from 'other' forms of economic inactivity). This allows us to show the falls in some forms of economic inactivity (notably among females) in parallel to a steady increase in SREI among both sexes. The second innovation is to divides the change in employment into two: *industrial employment* (including those whose workplace employment was in mining, manufacturing and energy, water and gas) and *non-industrial employment* (comprising those whose workplace employment was in all other sectors).

Thus the revised components that form the labour market accounts become:

	Industrial job losses
MINUS	Increase in employment in non-industrial employment
PLUS	Natural increase in the workforce
PLUS	Net in-migration
PLUS	Change in net commuting
PLUS	Exits from other forms of economic inactivity
MINUS	Withdrawal into SREI
EQUALS	Increase in recorded unemployment

Appendix 4 describes how each of the components was created in more detail. The second line measures changes in demand coming from growth in jobs in other (non-industrial) sectors. The third line measures natural change in the workforce, while the fourth to seventh lines of the accounts measure changes in labour supply emerging from

the decline in demand for industrial employment. Finally, the last line, showing the change in recorded unemployment, is the results of these components added together.

An overview of the accounts for the three clustered areas is shown in Table 5.1 (below). For each of the three clusters, the absolute change in each component (for all working-age people) and its relative value (as a proportion of the 1981 working-age population) is shown. Figures have been rounded to the nearest hundred to improve readability.

Table 5.1 Labour market accounts for three 'clustered' areas, 1981-2001: all persons

		Industrial Legacy		**Conurbations**		**Prospering Britain**	
		N	%	N	%	N	%
	Loss of industrial employment	122,500	9.0	995,100	12.3	636,400	5.9
MINUS	Increase in non-industrial employment	217,600	15.9	1,150,300	14.2	3,042,300	28.4
PLUS	Natural increase workforce	88,600	6.5	406,900	5.0	1,087,600	10.1
PLUS	Net in-migration	-41,000	-3.0	-574,600	-7.1	556,900	5.2
PLUS	In-commuting	27,100	2.0	166,600	2.1	551,100	5.1
PLUS	Exits from other forms of economic inactivity	26,200	1.9	145,100	1.8	289,300	2.7
MINUS	Withdrawal into SREI	72,600	5.3	442,200	5.4	329,200	3.1
EQUALS	Recorded change in unemployment	-66,800	-4.9	-453,400	-5.6	-250,400	-2.3

Sources: See Appendix.

Beginning with the cluster of three **Industrial Legacy** counties, 122,500 industrial jobs were shed over the 20-year period. Growth in service sector employment more than offset this: 217,600 non-industrial jobs were created in these three counties between 1981 and 2001. However in parallel to this, there was also a need to accommodate the natural increase in the workforce (+88,600), together with 26,200 people moving out of non

sickness-related economic inactivity e.g. women returning to work after having children and an increase in the number of in-commuters of similar magnitude. Out-migration (-41,000) acted as an adjustment mechanism to help balance the labour markets to some extent. Nevertheless, if not for 72,600 people withdrawing into sickness-related economic inactivity, unemployment would have risen slightly, rather than fallen by 66,800 as shown here.

In the **Conurbations**, despite the loss of nearly a million industrial jobs between 1981 and 2001 (995,100, 12.3% of the 1981 working-age population), recorded unemployment fell by more than 453,000. This might suggest unequivocal improvement taking the 20-year period as a whole. But again, the adjustment process was more complex. As Table 5.1 shows, natural population growth meant that the workforce in the conurbations increased by more than 400,000. There was also a large increase in net in-commuting (+166,600). Moreover, 145,100 people moved out of 'other' forms of economic inactivity to obtain or compete for employment. Together with industrial job losses this would have required 1.7m job generated in the conurbations to balance the accounts.

Both in-commuters and those leaving other forms of economic inactivity are likely to have been tempted into employment in the conurbations by the 1.15m non-industrial jobs generated between 1981 and 2001. Out-migration from the conurbations acted as a partial safety valve: more than half a million (574,600) working-age people moved outside the conurbations between 1981 and 2001 (though it is likely a proportion of them would retain their jobs in the Conurbations, becoming in-commuters). Compared with the earlier LMA analysis by Turok and Edge (1999) of the British conurbations in the 1980s, this data suggests a slowing of out-migration and lower natural population growth in the 1990s, perhaps related to the increased pace of job creation in the latter decade. On the other hand, in-commuting flows rose, meaning that renewed jobs growth in these urban areas attracted in more workers from outside their boundaries. This suggests a

partial break with the past for the Conurbations, though they still had some way to go to fully recover. Without the withdrawal of more than 440,000 working-age people into sickness-related economic inactivity (5.4% of the 1981 working-age population), the recorded fall in unemployment is likely to have been considerably reduced.

Turning to the 24 counties that constitute **Prospering Britain**, a rather different picture emerges. Here, too industrial job losses were large in absolute terms (636,400) but relatively less severe than that observed in the other clusters (5.9% of the 1981 working-age population, compared to 9% in the Industrial Legacy counties and 12.3% in the Conurbations). Non-industrial job creation in services was also considerably stronger in these counties. More than three million service sector jobs were generated in Prospering Britain over this period, enough to compensate the reduction in industrial employment almost five times over. Indeed, it was almost enough to accommodate the industrial job losses *combined* with a demographic expansion in the workforce of 1.6m (of which nearly two-fifths was in-migration) and more than a quarter of a million people entering the labour force from economic inactivity. Yet if a third of a million working-age people had not withdrawn into sickness-related economic inactivity in Prospering Britain, even its economic picture is unlikely to have been as favourable.

What might this mean for sickness-related economic inactivity? Creation of non-industrial employment was the largest single component of adjustment to traditional job loss in all three clusters. In other words, all three clusters were able to create more jobs in service sectors than they lost through deindustrialisation between 1981 and 2001. However, only Prospering Britain was able to generate *enough* new jobs in services to also accommodate the natural increase in the workforce, exits from other forms of inactivity and in-commuting. Expressed as a percentage of the 1981 working-age population, net job creation amounted to 22% in Prospering Britain but 7% in the Industrial Legacy areas and just 2% in the Conurbations. Weaker job creation might

partly explain why withdrawal from the labour force into sickness was relatively higher in Industrial Legacy areas and Conurbations.

The consequences of such spatially uneven employment growth were not confined to the older industrial areas. Withdrawal into sickness-related economic inactivity was largest in the Conurbations and Industrial Legacy areas (5-6% of the 1981 working-age population) but was also present in the Prospering Britain (at just over 3%). Why was this? Out-migration appears to have been the largest adjustment mechanism to labour market change in the Conurbations (-7.1%). This is partly a function of tight administrative boundaries around the English conurbations but is also likely to reflect real population transfer, especially to Prospering Britain.

The capacity for migration to rebalance the labour markets should not, however, be overstated. The point can be illustrated by examining the characteristics of 'wholly-moving household heads' who migrated from the Conurbations to Prospering Britain in the 12 months prior to the 2001 Census (*Table 5.2*).

Table 5.2: Heads of wholly moving households in 2000-01, flow from Conurbations to Prospering Britain, by NS-SEC

	N	%
Large employers and higher managerial occupations	1,589	9.0
Higher professional occupations	3,288	18.7
Lower managerial and professional occupations	4,860	27.7
Intermediate occupations	1,254	7.1
Small employers and own account workers	771	4.4
Lower supervisory and technical occupations	876	5.0
Semi-routine occupation	1,041	5.9
Routine occupations	670	3.8
Never worked and long-term unemployed	356	2.0
Full-time student	842	4.8
Not classifiable for other reasons	2,012	11.5
TOTAL	**17,559**	**100.0**

Source: 2001 Census of Population.

More than half (55.4%) were in professional/managerial occupations and a further 4.8% were full-time students. If this is representative of those who moved during the 1981-2001 period, then a majority of those moving were less vulnerable to unemployment and SREI. However, it may be that some of those moving into sickness-related economic inactivity in stronger labour markets were pushed to the back of the 'jobs queue' by competitors. Exits from 'other' forms of economic inactivity were of a greater magnitude in Prospering Britain compared with the Conurbations and Industrial Legacy areas, suggesting that plentiful jobs attracted relatively more groups like women returners into the labour market. Table 5.2 also shows that one-fifth of migrants were in basic (semi-routine or routine occupations), had never worked or long-term unemployed or were 'not classifiable for other reasons'. Their status as migrants suggests this group may well have been better equipped to compete for employment than the low-skilled already living in Prospering Britain (e.g. they may have been in better health or less constrained by family commitments or housing tenure).

The analysis above has considered working-age people as a whole: it is 'gender blind'. During the time frame considered, there were some signs of a convergence between men and women in the labour market, at least in terms of employment rates and (though less pronounced) types of occupations sought and the social division of domestic responsibilities. Having said that, there are real advantages in following the usual practice with labour market accounts is to show male and female labour market accounts separately. The next section provides a brief overview of why this is the case.

5.2.2 Male and Female Labour Market Adjustment in the Clusters

While there were more jobs available in Britain in 2001 than in 1981, employment opportunities were not distributed evenly across the population. Men (especially men in skilled, semi- and unskilled manual occupations) bore the brunt of losses in industrial employment, while the British labour market has grown both more 'white collar' and more feminine over the last 20 years. The labour market accounts approach above highlights the spatial dimension of these changes. Here this is extended by briefly considering how the structure of employment altered by gender. Moving away from a 'gender blind' analysis is particularly pertinent when dealing with deindustrialisation. As Table 5.3 demonstrates, men were disproportionately hit by structural change in the economy: more than two-thirds of industrial jobs lost in all three clustered areas were previously held by males.

Table 5.3: Share of industrial job losses, by gender and clustered area, 1981-2001

	Industrial Legacy		**Conurbations**		**Prospering Britain**	
	N	%	N	%	N	%
Men	86,300	70.4	713,600	71.7	464,000	72.9
Women	36,200	29.6	281,500	28.3	172,400	27.1

Source: 1981-2001 Census Special Workplace Statistics.

Some of the implications of this gender divide have been touched upon in Chapter 4, where the net *losses* of full-time male employment in the Conurbations were contrasted with substantial *gains* in full-time male employment in Prospering Britain. This analysis can be extended by repeating the LMA analysis for the three clusters between 1981 and 2001, but this time showing the components for men and women separately. The results are shown in Tables 5.4 and 5.5.

Some immediate points are worth drawing out from this analysis. First, for men in the Conurbations, growth in service sector employment failed to offset the loss of industrial jobs between 1981 and 2001. This 'gap' was equivalent to 202,000 jobs or 4.8% of the resident working-age male population in 1981. This was not the case for men in Prospering Britain (where the increase in non-industrial employment outstripped job losses in traditional industries more than 3:1) or Industrial Legacy areas; and nor was it the case for women in any of the three clustered areas.

A second importance distinction was in the change in 'other' forms of economic inactivity, which at first glance appears more related to gender than to the type of 'cluster'. For males, exits from (non sickness-related) economic inactivity were *negative*, reflecting withdrawal from the labour market into early retirement, caring responsibilities and other forms of inactivity alongside increased sickness-related economic inactivity. This pattern was evident in all three clusters, though male withdrawal into other forms of economic inactivity was slightly lower in Prospering Britain than in the Industrial Legacy and Conurbations. For females, exits from (non-sickness related) economic inactivity were *positive*, as more women (re)joined the labour force than flowed into other types of economic inactivity.

Table 5.4 Male labour market accounts for three 'clustered' areas, 1981-2001

		Industrial Legacy		Conurbations		Prospering Britain	
		N	%	N	%	N	%
	Loss of industrial employment	86,300	12.1	713,600	16.8	464,000	8.3
MINUS	Increase in non-industrial employment	96,700	13.6	511,400	12.1	1,495,200	26.7
PLUS	Natural increase workforce	36,900	5.2	132,200	3.1	518,700	9.3
PLUS	Net in-migration	-20,100	-2.8	-297,700	-7.0	287,500	5.1
PLUS	In-commuting	25,800	3.6	106,900	2.5	483,600	8.6
PLUS	Exits from other forms of economic inactivity	-43,500	-6.1	-263,400	-6.2	-297,900	-5.3
MINUS	Withdrawal into SREI	38,200	5.4	231,700	5.5	169,400	3.0
EQUALS	Recorded change in unemployment	-49,500	-7.0	-351,500	-8.3	-208,700	-3.7

Sources: See Appendix.

Table 5.5 Female labour market accounts for three 'clustered' areas, 1981-2001

		Industrial Legacy		Conurbations		Prospering Britain	
		N	%	N	%	N	%
	Loss of industrial employment	36,200	5.5	281,500	7.3	172,400	3.4
MINUS	Increase in non-industrial employment	120,900	18.5	638,900	16.5	1,547,100	30.2
PLUS	Natural increase workforce	51,700	7.9	274,700	7.1	568,800	11.1
PLUS	Net in-migration	-20,900	-3.2	-276,900	-7.1	269,400	5.3
PLUS	In-commuting	1,300	0.2	59,700	1.5	67,500	1.3
PLUS	Exits from other forms of economic inactivity	69,700	10.7	408,500	10.5	587,300	11.5
MINUS	Withdrawal into SREI	34,400	5.3	210,500	5.4	160,000	3.1
EQUALS	Recorded change in unemployment	-17,300	-2.6	-101,900	-2.6	-41,700	-0.8

Sources: See Appendix.

Not all forms of growth in economic inactivity are detrimental. Withdrawal into voluntary retirement on a good income or into full-time education can bring important gains to both individuals and society (for example though enhanced scope for volunteering and investment in human capital). Further analysis of the Census data allow changes in economic participation to be divided into four components: withdrawal into sickness-related economic inactivity, withdrawal into early retirement, movement into full-time education (without paid employment) and 'other' forms of economic inactivity. This last is a 'catch-all' category, but its most significant element for women is those engaged in looking after the home and family. Understanding how those joining and leaving the labour market redefined their status might provide important insights to labour market change in the clusters.

Figures 5.2 and 5.3 disaggregate the scale and direction of change in economic participation in the three clusters over the period. Each element of change is expressed as a percentage of the 1981 working-age population: negative figures show withdrawals from the labour force, positive figures exits from inactivity into the labour force. For men and women, the relative proportions withdrawing into sickness-related economic inactivity were gender balanced. Men were much more likely to withdraw into 'other' forms of economic inactivity or early retirement than women. The biggest gender divide here is for 'other' types of economic activity: for women, the positive flows are concentrated among this category. Eight out of ten women in the 'other' category were looking after home and family in 2008 (Leaker, 2009). This is consistent with the arguments advanced earlier about mothers returning to work after having children.

Figure 5.2: Changes in male working-age economic participation, by component and economic cluster: 1981-2001

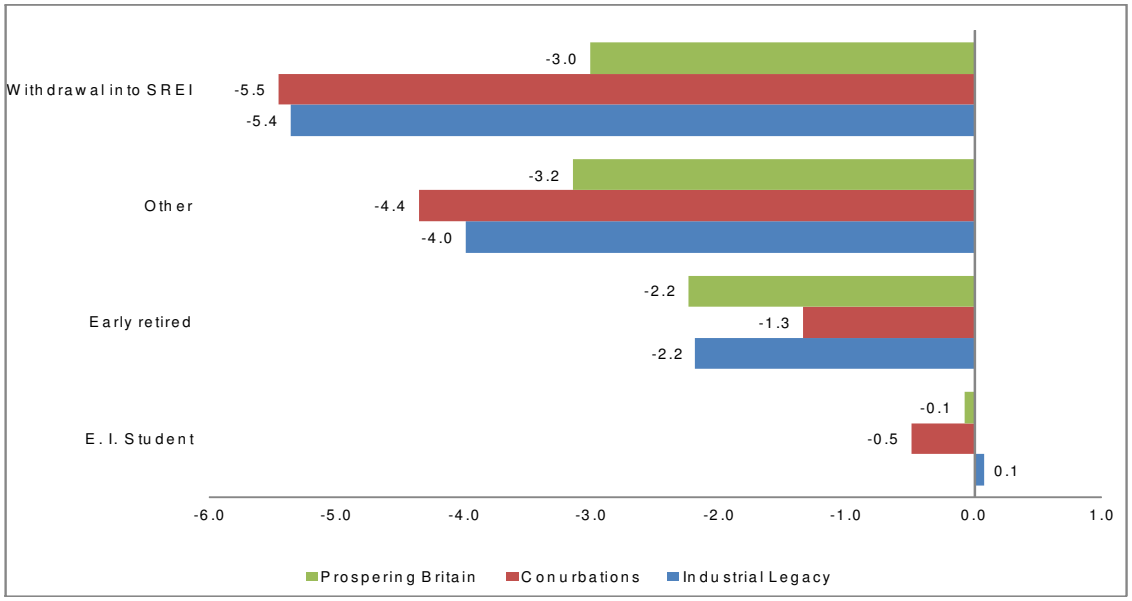
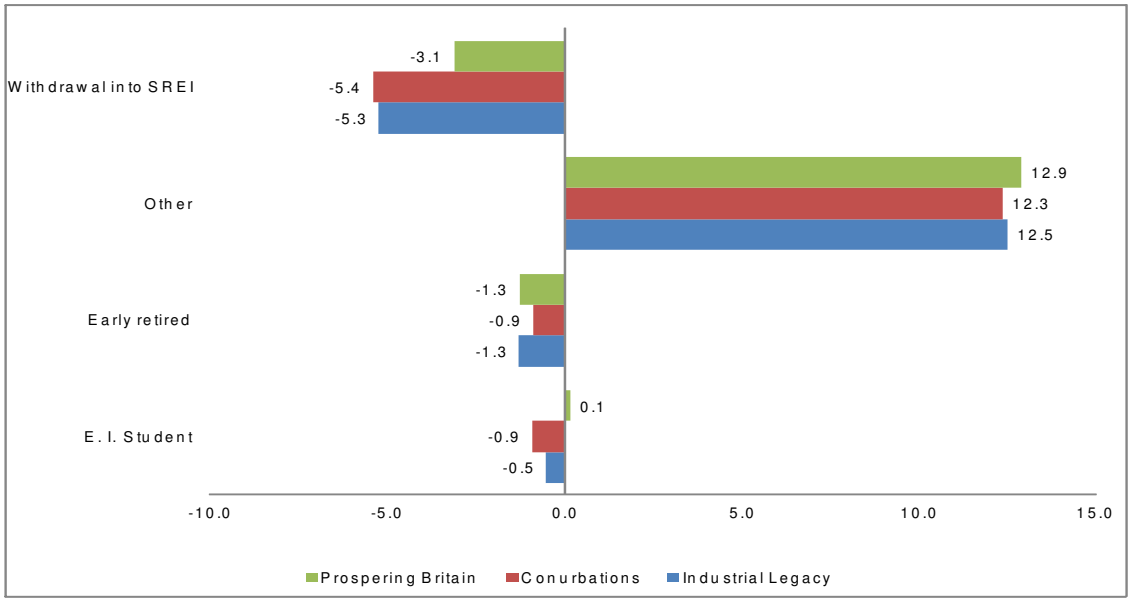


Figure 5.3: Changes in female working-age economic participation, by component and economic cluster: 1981-2001



Sources: 1981 & 2001 Census of Population

While female exits from 'other' types of economic inactivity were similar across all three clusters, spatial differences are apparent for all the remaining changes in economic participation. As might be expected the scale of withdrawal into sickness-related economic inactivity was lower in Prospering Britain for both sexes. Outside the Conurbations, increases in economically inactive students contributed little to the overall changes in participation for either sex. Early retirement was also relatively more important male adjustment mechanism in Prospering Britain and the Industrial Legacy areas than in the Conurbations. To the extent that early retirement represents a more positive self-perceived status than sickness-related economic inactivity, this may mean that the different in scale of withdrawal into *involuntary* economic activity outside of Prospering Britain was even greater than suggested here. This may have important implications, given that early retirement may also be a more reversible state of economic inactivity in an economic recovery than SREI (Clasen et al, 2004).

A further mystery remains around males who were economically inactive for other reasons: it is the second largest component of the reduction in economic participation after sickness in the Conurbations and Industrial Legacy areas and as important a component of change as sickness-related economic inactivity in Prospering Britain. Nonetheless, the available evidence suggests that not only was the scale of male withdrawal from the labour market less pronounced in Prospering Britain, the forms of their economic inactivity may be less problematic at an individual and societal level.

So far, it appears there was a more direct connection between labour market performance – especially the ability to replace industrial employment losses with service sector jobs – and withdrawal from the labour market for men in the Conurbations and Industrial Legacy Areas. But the impact on women should not be viewed as wholly benign. Factors influencing their passage into sickness-related economic inactivity may well have been both direct and indirect. Direct factors include the weaker female employment

growth seen in the Conurbations and Industrial Legacy areas, meaning that competition from women returners was relatively more intense in those areas. Indirect factors include a mix of the social and the financial.

One culprit may be rising levels of (largely) female lone parenthood, with family breakdown strongly associated with the growth in male worklessness (Rowthorn and Webster, 2008). Lone parents are particularly disadvantaged in the labour market by childcare constraints and health problems. Benefit and pension rules may also have played a role. For much of the period under discussion, there were financial disincentives – largely related to benefit rules – for the wives and partners of economically inactive males to enter or re-enter the labour market. Compared to men, women were also less likely to be able to access generous occupational schemes, making early retirement a less viable option. Finally, since the 1970s there has been tremendous growth in mothers' employment rates, especially those mothers who were the wives and partners of males already in employment (Berthoud, 2007; Gregg et al, 1999). Increased competition in the female labour market because of this might have played a role in displacing lower-skilled women. Overall then, the picture for women is more nuanced than for men, with some moving into the labour market and others withdrawing into sickness-related economic inactivity.

5.2.3 Labour market dynamics in individual counties

Having considered the impact on the clusters in aggregate, the nest step is to measure the performance of the individual counties. Here the framework adopted is that previously used by Beatty, Fothergill and Powell (2007) to measure economic regeneration in the English and Welsh Coalfields. The first, simplest measure of regeneration looks at the how effectively individual counties replaced losses in non-industrial employment. In presenting these figures, it must be acknowledged that replacement of industrial job losses alone may not present a fully rounded picture of regeneration (a point confirmed

by the labour market accounts). Nonetheless, Table 5.6 compares the number of industrial jobs lost against the number of non-industrial jobs gained over this period. Results are shown for all people, in the seven Conurbations, 24 of the Prospering Britain counties and the three Industrial Legacy counties.

Table 5.6: Replacement of industrial job losses, 1981-2001, by selected county

	Industrial Jobs Lost	Non-industrial Jobs Gained	% industrial jobs replaced, 1981-2001
Wiltshire	5,500	98,000	1782
Cambridgeshire	9,000	126,300	1403
Oxfordshire	7,600	97,300	1280
Hereford and Worcester	7,700	97,900	1271
East Sussex	9,400	87,100	927
South Glamorgan	5,800	48,200	831
West Sussex	15,600	130,000	833
Buckinghamshire	18,800	142,200	756
Northamptonshire	15,600	106,800	685
Berkshire	29,500	178,800	606
Surrey	31,000	163,400	527
Hampshire	44,500	230,500	518
Lothian	25,500	123,400	484
Suffolk	17,900	83,900	469
Kent	48,500	199,700	412
Warwickshire	19,900	81,400	409
Essex	54,600	216,100	396
Gloucestershire	20,800	78,900	379
Avon	48,900	162,900	333
Cheshire	47,500	140,400	296
Hertfordshire	62,400	172,900	277
Tayside	15,300	34,400	225
Lancashire	67,300	146,000	217
Leicestershire	63,900	134,500	211
Bedfordshire	37,400	72,600	194
West Yorkshire	136,500	256,000	188
Strathclyde	106,400	154,300	145
Greater Manchester	190,200	242,700	128
Tyne and Wear	76,800	86,800	113
South Yorkshire	121,300	123,580	102
West Midlands	258,400	242,100	94
Cleveland	40,000	37,200	93
Merseyside	105,500	44,900	43

Source: 1981-2001 Census Special Workplace Statistics. Note: Grampian excluded from analysis because it gained 11,000 industrial jobs over this period.

Table 5.6 suggests that with the exception of Merseyside, Cleveland and the West Midlands, all the counties effectively offset their industrial losses by 2001. This may be more of an issue for Merseyside and Cleveland, which had a more traumatic experience of adjustment evidenced by the job densities and Beveridge ratios (see Chapter 4). Table 5.6 also provides another illustration of the gulf between older industrial areas and Prospering Britain: in Wiltshire and Cambridgeshire (admittedly extreme examples) the ratio of service jobs created to industrial jobs lost was more than 14:1, whereas in Cleveland and Merseyside expansion in service jobs failed to offset losses in industry by 2001. As shown above, though, it was males who bore the brunt of industrial job losses. So to what extent were industrial job losses offset among *men*? Table 5.7 (next page) gives some idea.

This shows that for men, a larger number of areas were still to complete this process: altogether seven counties of the 33 examined had failed to fully off-set their male industrial job losses by 2001. These comprised six of the seven Conurbations as well as Cleveland. Merseyside's much more difficult transition is highlighted by the fact that just 7% of male industrial job losses were compensated for by 2001. Cleveland too had a problematic adjustment path: less than half (48%) of male industrial jobs shed had been replaced by service sector jobs by 2001.

Turning to the other counties, Greater Manchester (90%) appears to have been quite successful at generating non-industrial employment for men, while Tyne and Wear, the West Midlands and South Yorkshire had replaced about 60% of male industrial job losses. Strathclyde was somewhere in between, with more than two-thirds (70%) of male industrial job losses offset by 2001. Table 5.7 also illustrates that outside of Prospering Britain, Lancashire, West Yorkshire and Tayside were in an unusually strong position, with more than 100% of male industrial job losses offset by gains in other sectors.

Table 5.7: Replacement of male industrial job losses, 1981-2001, by selected county

	Industrial Jobs Lost	Non-industrial Jobs Gained	% industrial jobs replaced, 1981-2001
Wiltshire	4,500	45,800	1018
Hereford and Worcester	5,100	46,000	902
Cambridgeshire	6,800	57,600	847
East Sussex	5,900	41,400	702
Northamptonshire	8,100	52,600	649
West Sussex	10,300	66,100	642
Buckinghamshire	13,330	73,200	549
Oxfordshire	8,700	46,300	532
Berkshire	22,900	102,200	446
Surrey	22,500	90,000	400
South Glamorgan	5,300	18,300	345
Hampshire	33,000	107,800	327
Lothian	20,300	61,500	303
Essex	37,500	107,500	287
Warwickshire	15,400	43,500	282
Suffolk	11,700	33,000	282
Kent	36,600	93,800	256
Avon	38,300	82,000	214
Gloucestershire	16,800	35,600	212
Hertfordshire	46,200	95,000	206
Cheshire	37,900	64,600	170
Leicestershire	38,000	61,800	163
Lancashire	43,500	68,900	158
Bedfordshire	27,600	36,900	134
West Yorkshire	92,600	122,300	132
Tayside	10,300	12,100	117
Greater Manchester	127,200	114,100	90
Strathclyde	78,500	55,000	70
West Midlands	187,900	118,800	63
Tyne and Wear	58,000	36,600	63
South Yorkshire	94,900	59,700	63
Cleveland	32,600	15,700	48
Merseyside	74,600	4,900	7

Source: 1981-2001 Census Special Workplace Statistics. Note: Grampian excluded from analysis because it gained 8,500 industrial jobs over this period.

The poorer performance of the Industrial Legacy areas and Conurbations overall (relative to Prospering Britain), together with the mixed performance of individual counties within these two clusters, raises some interesting questions. For example, were older industrial areas with strong service sector growth able to reduce the flow of people into sickness-

related economic inactivity? Or was the crucial factor the size of industrial jobs losses in the first place, so that areas which retained or 'remade' their industrial jobs base saw lower outflows to SREI?

To answer some of these questions, it may be valuable to examine the individual components of labour market change for men and women for the 10 counties of the Industrial Legacy areas and Conurbations separately: these findings are shown in tables 5.8 and 5.9. (Each component is expressed as a proportion of the 1981 working-age population).

Beginning with males, a number of observations can be made. Even in the older industrial areas, there were 'winners' and 'losers' in terms of growth of sickness-related economic inactivity. In Tayside, West Yorkshire and the West Midlands, the proportion of males diverted to sickness-related economic inactivity was less than 5%. In Strathclyde it was 6.5%, and in Merseyside close to 7%. For males, it was not just the loss of industrial employment, but the capacity to replace these jobs that mattered on the demand-side. Merseyside, Tyne and Wear and Greater Manchester lost a similar proportion of male industrial jobs but saw negligible, moderate and high service sector male jobs growth – and the rate of diversion to SREI appears to have been inversely related to this. Competition from commuters for the service sector jobs that were created was higher in some areas, notably in Lancashire, West Yorkshire and Strathclyde. Out-migration as an adjustment mechanism appeared to work better where local labour market demand was also more favourable. Merseyside, the West Midlands and Cleveland all saw 12% or more of their male population leave the area over a 20-year period, but only the West Midlands (with better job replacement) saw lower flows into sickness-related economic inactivity.

For women, a different pattern can be observed. Increase in female economic activity was generally strongest in those areas with relatively larger female (and male) flows into sickness-related economic inactivity, such as Cleveland and Strathclyde. This might be interpreted in a number of ways. For instance, it could mean that female returners were 'displacing' other groups, especially older males with health problems, from the labour market. Alternatively it could just mean that these areas were 'catching-up' with less industrialised areas which had seen growth in female participation rates in previous decades.

Table 5.8 Male Labour Market Accounts for Industrial Legacy Areas and Conurbations, 1981-2001

		MINUS	PLUS	PLUS	PLUS	PLUS	MINUS	EQUALS
	Loss of industrial employment	Increase in non-industrial employment	Natural increase workforce	Net in-migration	In-commuting	Exits from other forms of economic activity	Withdrawal into SREI	Recorded change in unemployment
West Midlands	22.5	14.2	7.2	-12.9	-0.1	-6.9	4.3	-8.7
Greater Manchester	15.8	14.2	4.1	-6.5	4.5	-5.7	5.6	-7.6
South Yorkshire	23.3	14.6	3.7	-5.3	-1.1	-6.6	5.4	-6.0
West Yorkshire	14.8	19.5	8.3	-4.2	5.6	-6.6	4.1	-5.8
Strathclyde	10.7	7.5	-5.4	*	4.9	-6.0	6.5	-9.8
Merseyside	16.0	1.1	1.7	-13.5	-1.5	-5.6	6.9	-10.8
Tyne and Wear	16.1	10.1	1.0	-7.2	3.3	-6.1	6.3	-9.5
Lancashire	10.5	16.7	5.8	0.4	5.7	-6.1	5.4	-5.7
Cleveland	17.9	8.7	4.1	-12.1	-0.3	-5.8	5.9	-10.8
Tayside	8.9	10.5	4.8	*	2.4	-6.7	4.5	-5.6

Sources: See Appendix.

Note: Migration data unavailable for Scottish counties: their migration component has been absorbed into the natural increase in the workforce.

Table 5.9 Female Labour Market Accounts for Industrial Legacy Areas and Conurbations, 1981-2001

		MINUS	PLUS	PLUS	PLUS	PLUS	MINUS	EQUALS
	Loss of industrial employment	Increase in non-industrial employment	Natural increase workforce	Net in-migration	In-commuting	Exits from other forms of economic activity	Withdrawal into SREI	Recorded change in unemployment
West Midlands	9.4	16.5	13.0	-13.8	1.6	8.2	4.4	-2.4
Greater Manchester	8.6	17.5	8.4	-7.6	1.5	9.0	5.4	-3.0
South Yorkshire	7.7	23.4	12.9	-4.2	1.9	7.7	4.3	-1.7
West Yorkshire	7.1	9.2	5.6	-11.9	-0.5	11.9	6.6	-3.6
Strathclyde	4.0	14.3	-2.7	*	2.4	13.8	6.6	-3.4
Merseyside	7.1	17.3	6.3	-5.5	0.3	12.9	5.2	-1.5
Tyne and Wear	6.3	20.4	8.6	-0.2	-0.4	8.6	5.1	-2.7
Lancashire	5.7	15.3	4.1	-6.8	3.1	12.7	6.0	-2.4
Cleveland	4.5	13.0	8.7	-12.1	0.1	15.4	6.0	-2.4
Tayside	4.6	20.3	4.4	*	2.4	10.6	4.6	-2.9

Sources: See Appendix.

Note: Migration data unavailable for Scottish counties: their migration component has been absorbed into the natural increase in the workforce.

5.2.4 Economic Regeneration in the Conurbations and Industrial Legacy Counties

Beginning the analysis of these local labour markets in 1981 neglects their immediate historical context. The methodology used to overcome this limitation is that proposed Beatty, Fothergill and Powell (2007). Their method incorporates pre-existing (1981) unemployment, together with commuter flows, to calculate a hypothetical 'jobs shortfall'. This is then offset by commuting, out-migration and the creation of non-industrial employment, to produce the remaining jobs shortfall. Given the evidence presented so far, it would seem sensible to confine these calculations to the Conurbations and Industrial Legacy areas. The basic calculation for these two clusters (for all persons) is set out in table 5.10 below.

Table 5.10: Regeneration in the Industrial Legacy counties and Conurbations, 1981-2001 (all persons)

		Industrial Legacy	Conurbations
	Loss of industrial employment	122,600	995,100
PLUS	1981 Unemployment	130,600	852,200
PLUS	Natural increase in workforce	88,600	406,900
EQUALS	**Original jobs shortfall**	**341,800**	**2,254,100**
PLUS	Net in-migration	-41,000	-574,600
PLUS	In-commuting	27,100	166,600
MINUS	Increase in non-industrial employment	217,600	1,150,300
EQUALS	**Remaining shortfall**	**110,300**	**695,800**

Sources: See Appendix.

In 1981, there were already 130,000 people unemployed in the **Industrial Legacy** areas. Adding this to 122,600 industrial job losses and the natural increase in the workforce produces an original 'jobs shortfall' of 341,800. To this should be added net out-migration (-41,000), net in-commuting (27,100), while growth in non-industrial employment (217,600) should be subtracted. Altogether this reduced the 'jobs shortfall' in the Industrial Legacy areas to 110,300. As a piece, two-thirds (68%) of the jobs shortfall in these three counties had been eliminated by 2001.

Repeating the process for the **Conurbations** means adding unemployment in excess of 850,000 to nearly a million industrial job losses, and a natural increase in the workforce of more than 406,000. The original jobs shortfall across these seven counties therefore stood at 2.25m. In the case of the Conurbations, large scale in-commuting further added to the shortfall (+166,600): it was the increase in non-industrial jobs (1.15m) and substantial out-migration (-574,600) that counteracted these losses. By reducing the jobs shortfall to 695,000, this suggests that two-thirds (69%) of the Conurbations 'jobs shortfall' had been effectively offset by the time of the 2001 Census.

Following Beatty, Fothergill and Powell's example (2007) for the English coalfields, it might also be useful to present the results of this analysis for each of the 10 Industrial Legacy and Conurbation counties individually, showing the original absolute 'jobs shortfall' for all persons and the proportion eliminated by 2001 (Table 5.11). For each county, the figure given in the third column is a rough guide to its level of economic recovery – the closer this is to 100% this is, the more it 'bounced back' by the millennial Census.

Table 5.11: Jobs shortfall eliminated by 2001, all working-age people, selected counties

	Original jobs shortfall, all persons, 1981-2001	% of shortfall eliminated by 2001
West Midlands	594,000	**74**
Greater Manchester	429,600	**71**
West Yorkshire	362,100	**72**
Merseyside	251,700	**67**
Strathclyde	217,500	**47**
South Yorkshire	226,800	**75**
Lancashire	188,700	**65**
Tyne and Wear	172,400	**66**
Cleveland	106,300	**75**
Tayside	46,800	**62**
All conurbations & industrial legacy counties	**2,595,400**	**69**

Sources: See Appendix.

This more encompassing measure of regeneration paints a subtly different picture than that seen in Table 5.6. Adding in pre-existing unemployment, natural growth in the workforce and the adjustment mechanisms (commuting, migration etc.) produces a narrower range of outcomes for these areas. Whereas 'industrial job replacement' varied from 43% in Merseyside to 225% in Tayside, here the variation runs from 47% in Strathclyde to 74% in Cleveland. Table 5.11 also hints that recovery was more marked in Cleveland and South Yorkshire (both 75%), and least impressive in Strathclyde (47%) and Tayside (62%). As it was males that were most affected by deindustrialisation

however, it is possible to show how the economic regeneration in the 10 counties affected the genders separately. The results of this are shown in Table 5.12.

Table 5.12: Economic Regeneration, male and female labour markets, in the Industrial Legacy counties and Conurbations combined, 1981-2001

		Males	Females
	Loss of industrial employment	799,900	317,700
PLUS	1981 Unemployment	709,000	273,700
PLUS	Natural increase in workforce	169,000	326,400
EQUALS	**Original jobs shortfall**	**1,678,000**	**917,900**
PLUS	Net in-migration	-317,800	-297,800
PLUS	In-commuting	132,700	61,000
MINUS	Increase in non-industrial employment	608,100	759,800
EQUALS	**Remaining shortfall**	**884,800**	**-78,700**

Sources: See Appendix.

Using this approach show that the 'jobs shortfall' for females across these areas was *negative*, with 78,700 'extra jobs' created for women across these areas. In other words, the growth in non-industrial employment coupled with net out-migration more than compensated for deindustrialisation in the female labour markets. (Though this ignores the increased labour supply from females exiting economic inactivity). By contrast, just under half (47%, 793,200) of the jobs shortfall for males had been eliminated by 2001, leaving a shortfall of 885,800. Therefore, this section concludes by concentrating exclusively on males in the Industrial Legacy areas and Conurbations. Table 5.13 (below) reprises the approach shown in 5.12, for working-age males only.

Table 5.13: Jobs shortfall eliminated by 2001, all working-age males, selected counties

	Original jobs shortfall, males, 1981-2001	% of shortfall eliminated by 2001
West Midlands	379,400	**60**
Greater Manchester	262,000	**50**
West Yorkshire	216,100	**53**
Merseyside	165,400	**45**
Strathclyde	160,000	**12**
South Yorkshire	159,200	**54**
Lancashire	111,400	**39**
Tyne and Wear	121,000	**42**
Cleveland	73,800	**52**
Tayside	29,700	**31**
All conurbations & industrial legacy counties	**1,678,000**	**47**

Sources: See Appendix.

To a great extent this echoes the position for all working-age residents. Males in Strathclyde and Tayside experienced the weakest 'bounce back', with just 12% and 32% of the total jobs shortfall overcome by 2001. Lancashire (39%), Tyne and Wear (42%) and Merseyside (45%) also saw weak replacement of their employment base. At the other end of the (narrow) spectrum, the West Midlands (60%), alongside West and South Yorkshire (both 53%) and Cleveland (52%) fared rather better.

Altogether, this analysis provides a partial explanation for why places like Tyne and Wear and Strathclyde – which saw their labour markets expand strongly in the 1990s – appear alongside places like Merseyside and Cleveland in the 'league table' of sickness-related economic inactivity. Particularly for men, expansion in service sector jobs over this period was too weak to compensate for high inherited levels of unemployment coupled with prolonged deindustrialisation. The end result was a continued jobs shortfall for men outside of Prospering Britain, with withdrawal into SREI forming an important component of this.

5.2.5 Components of change and sickness-related economic inactivity

There are a number of ways in which the dynamics of labour market change in Britain might have interacted with SREI. Some of these have been alluded to above, but it is appropriate here to discuss them in more detail. **Job destruction** might favour a simple correlation between loss of industrial employment and growth of sickness-related economic inactivity (though the casual pathways are likely, in this conception, to be more complex for women). **Weaker growth** might focus on the ability of local labour markets to generate new non-industrial jobs to replace those lost. **Demographic change** might also contribute, though loss of population depressing demand and delaying recovery, but also through a 'healthy worker' effect, as those left behind in areas facing challenging economic adjustment are likely to be the least healthy. There is some evidence that population loss overall, but not differences in migration, can act to damage population health (Mitchell et al, 2009). Finally, there might be a **displacement** effect, as employers are more likely to recruit women returners or commuters in preference to the unemployed or short-term sick. Sooner or later, the latter might become discouraged, so that those with health problems become more likely to move into SREI. Using the Labour Market Accounts data, it is possible to take our analysis a stage further and test these theories.

Individual components of labour market change were calculated for all 43 counties in the Conurbations, Coalfields and Industrial Legacy areas and Prospering Britain. Job destruction is measured by the loss of male/female industrial employment component and weaker growth by the expansion of male/female service-sector employment. Demographic change combines migration and natural population growth into a single component. There are also two measures of displacement, female exits from other forms of economic inactivity and change in male/female commuting. These are all expressed as a percentage of 1981 working-age population and are the explanatory variables. Withdrawal into sickness-related economic inactivity, expressed in the same way, is the dependent variable, for men and women. Results are summarised in Tables 5.14 and 5.15.

For both men and women, the association between job destruction and withdrawal into SREI was a significant but weak. A far stronger and significant association was found between weaker generation of non-industrial employment and rising SREI for both men and women, with demographic change was the next most powerful influence for both genders. Places with weaker population growth or population decline saw the greatest increases in SREI. Displacement by commuters (for men), displacement by women returners (for women) and job destruction had weaker but still significant associations, though for commuting this was negatively signed (i.e. areas with greater levels of in-commuting saw lower growth in sickness-related economic inactivity). For both genders, by far the strongest components of labour market change associated with growth in SREI in these counties were creation of non-industrial employment and demographic change. Weak employment growth and loss of population seem to be closely associated with rates of withdrawal into SREI.

Table 5.14: Components of labour market change associated with rates of male withdrawal into SREI

	Constant (standard error in brackets)	Coefficient (standard error in brackets)	R Square	t-score	Number of counties (N)
Job destruction (Loss of industrial employment)	3.40 (0.48)	0.08 (0.04)±	0.08	1.8	**43**
Weaker growth (Expansion of non-industrial employment)	6.88 (0.31)	-0.13 (0.01)**	0.69	-9.6	**43**
Demographic change	5.13 (0.22)	-0.11 (0.02)**	0.51	-6.6	**43**
Displacement by women returners (Growth in females exiting other forms of economic activity)	2.63 (0.94)	0.12 (0.08)	0.06	1.7	**43**
Displacement by male in-commuters	4.95 (0.34)	-0.12 (0.04)*	0.18	-3.0	**43**

*Note: ± significant at P<0.10 *significant at P<0.05 **significant at P<0.01*

Table 5.15: Components of labour market change associated with rate of female withdrawal into SREI

	Constant (standard error in brackets)	Coefficient (standard error in brackets)	R Square	t-score	Number of counties (N)
Job destruction (Loss of industrial employment)	3.54 (0.47)	0.17 (0.09)±	0.08	1.9	43
Weaker growth (Expansion of non-industrial employment)	8.20 (0.56)	-0.15 (0.02)**	0.57	-7.4	43
Demographic change	5.62 (0.30)	-0.12 (0.02)**	0.44	-5.7	43
Displacement by women returners (Growth in females exiting other forms of economic activity)	2.37 (1.01)	0.17 (0.08)±	0.09	2.0	43
Displacement by female in-commuters	4.38 (0.26)	-0.10 (0.08)	0.04	-1.3	43

*Note: ± significant at P<0.10 *significant at P<0.05 **significant at P<0.01*

5.3 Conclusions

5.3.1 Main points

This chapter began by posing some basic questions about the dynamics of local labour market change and the implications for SREI in Britain.

1. *How did labour markets in selected clusters and counties change between 1981 and 2001 and what were the implications for SREI?*

Structural change was felt quite differently in the Conurbations and Industrial Legacy areas than in Prospering Britain between 1981 and 2001. Combined, the Conurbations and Industrial Legacy areas shed 1.12m industrial jobs and gained 1.37m service sector jobs. However, Prospering Britain's performance was much better: it lost two-thirds of a million industrial jobs but gained 3m non-industrial jobs. While the whole of Britain saw its employment base shift away from industry to services and create more employment for women between 1981 and 2001, older industrial areas faced a much more difficult adjustment in quantitative and qualitative terms.

Such marked diversity in changes to labour market was accompanied by notable differences in response among the actual and potential labour force. Large-scale out-migration from the Conurbations and Industrial Legacy areas continued in the 1990s, albeit on a smaller scale than in the previous decade: the counterpoint of this was the large in-flows of working-age people to the counties of Prospering Britain. On the conservative figures calculated here, more than half a million flowed in either direction.

Natural population growth and expansion in net in-commuting was much stronger in Prospering Britain than in Older Industrial Britain. A partial exception to this observed

divergence is the relative increases in female economic participation and male outflows to 'other' (non-sickness) related economic inactivity, which show much less variation between clusters.

Nevertheless, without large-scale withdrawal of people into sickness-related economic inactivity, the reduction in unemployment (even in Prospering Britain) would not have been as impressive. In percentage terms, this amounted to nearly 6% of the 1981 working-age population in the Conurbations and Industrial Legacy areas and 3% in Prospering Britain. It is notable that the withdrawal into sickness-related economic inactivity among working-age women was, as a proportion of their 1981 population, similar in magnitude to that seen among men across all three clusters. This fully justifies the recent shift towards studying sickness-related economic inactivity among *both* genders (Kemp and Davidson, 2009). On the other hand, it must be noted that not only was the magnitude of the withdrawal into SREI less pronounced outside of Older Industrial Britain, the relative share of 'other' – arguably less detrimental and more reversible – forms of economic inactivity was larger. Finally, the degree to which this migration addressed imbalances between supply and demand in labour markets was more limited. Only a minority – perhaps a fifth – of migrants flowing from the Conurbations to Prospering Britain were either unemployed or in occupations vulnerable to sickness-related economic inactivity.

Perhaps unsurprisingly, adjustment patterns also varied *within* economic clusters at a county level. In the Conurbations, Merseyside experienced much weaker growth of service sector employment than Greater Manchester; while Strathclyde males saw stronger competition for jobs from commuters relative to Tyne and Wear, for example. In the Industrial Legacy areas, Tayside and Lancashire appear to have weathered the storm of economic adjustment more effectively than Cleveland.

2. *To what extent had Conurbations and Industrial Legacy areas recovered from structural employment change by 2001?*

As late as 2001, many of the Conurbations and Industrial Legacy counties had failed to replace male industrial job losses with new jobs in service industries. This was most marked in Cleveland and Merseyside. But even replacement of industrial jobs might not have been enough. If a wider measure of regeneration is used, taking into account counties' starting points, then a shortfall of more than 880,000 male jobs remained across 10 counties by 2001.

3. *Outside of Greater London and Rural & Coastal Britain, which components of the labour market accounts were most strongly associated with SREI?*

Explanations for the growth of sickness-related economic inactivity are unlikely to be wholly or even largely attributable to 'displacement' by women returners and commuters. There is no association between female outflows from other types of economic inactivity and withdrawal into sickness-related economic inactivity sickness for men and the magnitude of the association for women, while real, is small. Some displacement of men by commuters may have occurred (especially in 'thicker' labour markets) but again the contribution to SREI is likely to be small. Rather more compelling are those related to the strength of local labour market, and particularly their capacity to replace industrial losses with service sector employment. Hidden unemployment then, seems to be at least as much about economic opportunity as social change.

5.3.2 Discussion

The analysis presented in this chapter raises a number of issues. First, it suggests that labour market weaknesses were still exerting an influence on sickness-related economic

inactivity in the 1990s – and were still in existence as late as 2001. Many more jobs were created in the British economy in the 1990s, but, as noted elsewhere: *"replacement jobs for men in particular were not always to hand either in the same place or at the same time"* (Devine, 1999:598). It might be added that they often were not created in the quantities required either, at least until post-2001. Place and time are indeed relevant; 20 years might be considered a substantial period for labour markets still to be adjusting.

Second, the picture presented here supports the view that changes in the British labour market between 1981 and 2001 saw winners and losers at a spatial and individual level. Spatially, the trends could be used to substantiate either the view of a continuing North-South divide, or of a more finely balanced patchwork of strong and weak labour markets. The variation between counties outside of Prospering Britain is particularly interesting. Some places (e.g. Merseyside, Cleveland) were very severely affected, signalling ongoing major difficulties; others (e.g. Greater Manchester, Lancashire) saw something of a turnaround. What is clear, though, is that the claim made in 2000 that worklessness was not about employment opportunities, and confined to small pockets of the country (HM Treasury, 2000, Paragraph 4.31) is much less plausible in this light.

The sheer length of time taken for improvement – and continued evidence of male jobs shortfalls – is worthy of comment. One view might be that comments made more than a decade before 2001 remained relevant: *"the decline in many of these areas has been such that a kind of economic hysteresis effect has occurred, whereby the depth of contraction has retarded the process of economic recovery"* (Martin, 1988: 411). Even where the overall move away from older industries was strong, legacy effects also seem to have remained important. Strathclyde provides a good example of this. Replacement of male industrial employment was actually rather better than some other English Metropolitan counties – but inherited unemployment from the 1970s was simply too large to be overcome without substantial withdrawal into SREI. In Chapter 8, these arguments, and

the extent to which hysteresis effects present (or emerged) on the supply and demand side of the labour market, will be explored in more detail.

At an individual level, winners tended to be females moving out of inactivity – and from the evidence elsewhere, it is more likely they were mothers with partners. Those losing out tended included men moving into early retirement and those of both sexes moving into sickness-related economic inactivity. This matters principally because of the unequal position men and women in the labour market, and the uneven distribution of work between households. Women tend to be lower paid than men and also bear the brunt of caring responsibilities, suggesting that the trade-off is not costless. But potential difficulties with the processes described above do not end there. While couples (especially couples with children) with two-earners have a negligible risk of poverty, more than a fifth of households with only one earner fall below the poverty line. Single earner couples, especially without children, are more likely to be in receipt of benefits (Simon and Whiting, 2007; HBAI DWP, GB). Exchanging male for female labour – even if the incomes attached to the jobs lost and gained are identical – is unlikely to address this.

Ultimately this may have led to a situation where the wives and children of those disenfranchised by deindustrialisation were more likely to become (and remain) economically inactive themselves. This would be consistent with a process already described over the past two decades: the polarisation of households into 'work-rich' and 'work-poor', so that many of the jobs generated in the 1990s went to the wives and partners of those already in work, reflecting a long-term trend (Gregg et al, 1999: 88-89; Berthoud, 2007). Continued shortages of male jobs in some areas may also have had an impact on the pace of growth of SREI for both sexes in the 1990s. So were the 'new' claimants in the 1990s – with a younger age profile and more even gender balance than the previous decade – the children and partners of the original cohort? And if this

occurred, what were the mechanisms that facilitated this? In the next chapter, we move on to try and address these issues, beginning by looking at a more neglected group affected by sickness-related economic inactivity: young adults.

Chapter 6 Young adults and sickness-related economic inactivity: Describing the issue

6.1 Introduction

6.1.1 Background

On the face of it, young adults should have been less likely to be affected by SREI. The steady expansion of post-secondary education in Britain, disproportionately benefiting young adults, continued apace over the last two decades (Elias and Purcell, 2009). More recently, the New Deal for Young People (NDYP), in operation since 1998, has offered a more proactive approach towards long-term youth unemployment. Although the picture is less positive for mental and sexual health, the physical health of young adults also compares well with other age groups. In any case, while large numbers of young adults in Britain are Not in Education, Employment or Training (NEET), most attribute their marginalisation to unemployment or childcare responsibilities (Furlong, 2007). Lack of direct exposure to deindustrialisation, more labour market choices and better health might prompt the conclusion that sickness-related economic inactivity among young adults is a low priority and driven by distinctive forces compared with older working-age adults.

There are real shortcomings to these assumptions. First, the literature (see Chapter 2) suggests that SREI cohort has changed over time, becoming younger and more gender balanced. As noted in a study of changes in the composition of male Incapacity Benefits claimants in the industrial town of Barrow: *"the skilled craftsman, forced out by redundancy and still hankering after employment, is disappearing. His place is being taken by the poorly-qualified, low-skill manual worker in poor health"* (Beatty and Fothergill, 2007: 139). Second, the reduction of claimant unemployment and growth in SREI among young adults mean that it has become relatively more pressing as a factor in labour market exclusion. In the Spring of 2006, nearly a quarter of a million young adults aged 16-24 were claiming Job Seeker's Allowance (JSA) but a third of a million were claiming other benefits, including 165,000 on Incapacity Benefits (IB). For every

16 young adult Job Seekers there were another 10 on IB: equivalent to the number of young adults claiming benefits related to lone parenthood (*Table 6.1*).

Table 6.1: Young adults claiming key benefits: Great Britain, May 2006

	JSA	Lone Parents	Incapacity Benefits
Aged 16-24	270,730	165,690	166,640

Source: DWP WPLS.

Finally, Chapters 4 and 5 have already demonstrated that the impact of deindustrialisation was not purely a legacy effect, but that ongoing labour market weaknesses impacted on those less likely to be employed in heavy industry. For instance, while women made up just a third of those employed in manufacturing, mining or energy in 1981, their rate of withdrawal into sickness-related economic inactivity (SREI) was no different to that seen among men. While the association between replacement of industrial job losses and withdrawal into SREI was somewhat weaker for women compared to men, it was still moderate and statistically significant. Young adults in Britain, especially those living in older industrial areas, are unlikely to have been entirely immune from these qualitative and quantitative changes in the labour market.

As a prelude to accounting for the rise of SREI among young adults (see Chapter 7), this chapter describes the problem in more detail. Key questions addressed are:

- How did sickness-related economic inactivity among young adults in Britain change between 1981 and 2006: nationally, in the clusters and in the counties?
- What are the characteristics and attitudes of young British adults affected by SREI?
- How do young British adults affected by SREI compare with the young adults claiming Job Seeker's Allowance (JSA) and older working-age IB claimants?

After discussing definitions, data sources and the challenges involved in this task, the chapter will describe how the numbers of young adults claiming long-term Incapacity Benefits changed in Britain between 1981and 2006, at a national and local level. Succeeding sections use this framework to profile the individual employability of young adults on IB in Britain, including both labour market and health and wellbeing characteristics. Where possible, comparisons are also made with working-age people claiming IB and young adults claiming Job Seeker's Allowance (JSA).

6.1.2 Methods and data sources used

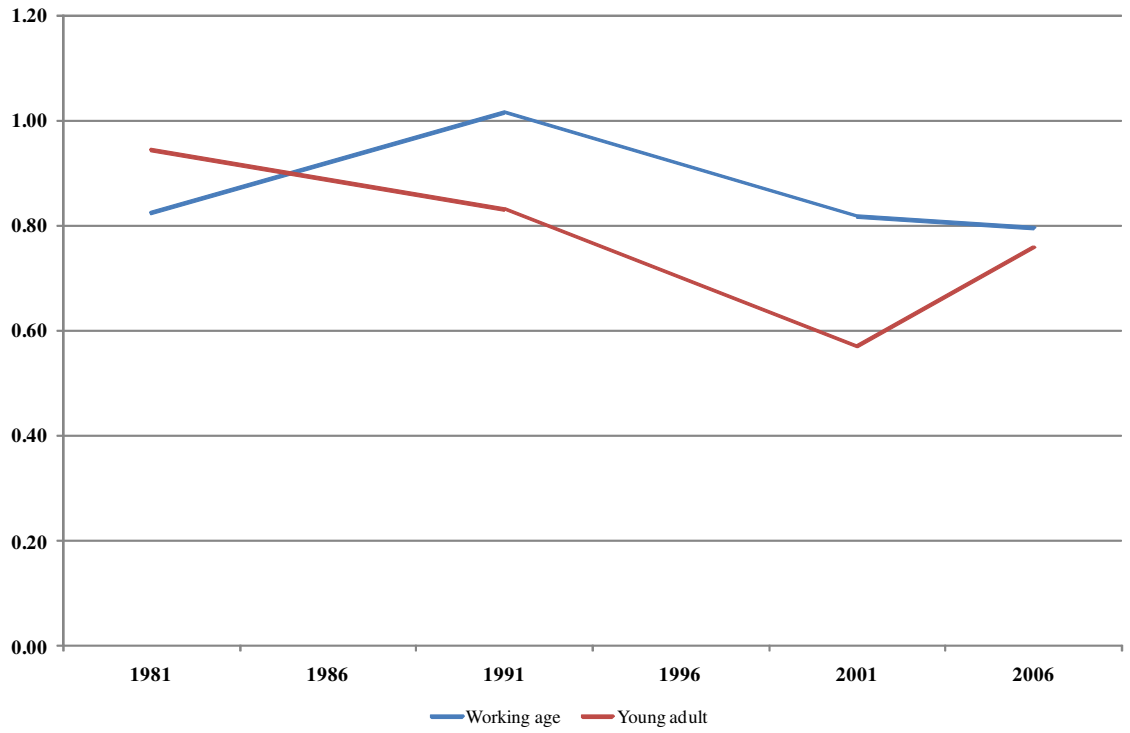
As described in Chapter 3, there are two main ways of capturing the change: benefits data drawn from administrative sources and surveys of the general population. Measuring sickness-related economic inactivity (SREI) over time among young adults is more complicated than for the working-age cohort. SREI increased for young adults over time, by between 60,000 and 88,000, depending on the measure used. In 1981, the three measures of young adult SREI were broadly in accord. Over time, these measures diverged, with the number of long-term IB claimants aged 16-24 exceeding those defining themselves as permanently sick/disabled or long-term sick and disabled by the mid 1980s, a discrepancy which widened until 2001 before narrowing somewhat (*Table 6.2*). The extent of this discrepancy is also larger than that for working-age adults. In 1991, 2001 and 2006, the survey: benefits ratio for young adults defining was lower than the ratio for working-age adults (*Figure 6.3*).

Table 6.2: Sickness-related economic inactivity among young adults (aged 16-24): Britain, 1981-2006

	1981	1986	1991	1996	2001	2006	Change 1981-06
Benefits	45,000	80,000	84,000	127,000	124,000	133,920	+88,920
LFS	41,391	46,746	48,166	71,654	65,531	101,443	+60,052
Census	39,073		69,794		70,564		

Sources: Social Security Statistics; DWP WPLS; Census of Population; Labour Force Survey. For definitions see Table 3.2.

Figure 6.1: Ratio of survey to benefits measures of SREI in Britain, young adults and working-age people: 1981-2006



Sources: 1981, 1991 and 2001 Censuses of Population; 2006 Labour Force Survey; 1% sample, Social Security Statistics, 1981, 1991; DWP WPLS 100% sample 2001 and 2006.

While the reasons for these differences are unclear, possible explanations might include:

- Although their health condition warranted claiming Incapacity Benefits (IB) young adults were less likely to consider it permanent (i.e. it was a manageable condition or one they considered would improve with time);
- They claim Incapacity Benefits, but see themselves as unemployed (looking for work), are a student or see other issues (e.g. substance misuse, pregnancy) as their main reason for economic inactivity.

This creates a problem when exploring SREI among young adults. In particular, surveys are likely to exclude young adults who do not see their health problems as *incapacitating*, even if in practice they are not seeking work and face major health problems even before they re-engage with the labour market. As a pragmatic response, a mixture of administrative and survey data is used to deepen the state of knowledge on this issue. Benefits data increases understanding of how the issue changed over time and their geographic concentration relative to adults on long-term Incapacity Benefits and young unemployed adults. The Census provides clues as to the distribution in sickness-related economic inactivity among young adults at a local level. Other surveys, such as the Labour Force Survey, British Cohort Survey and Psychiatric Morbidity Survey, allow a thorough examination of the characteristics of young adults affected by SREI in Britain and how they compare with other groups. This is consistent with the 'data triangulation' approach adopted throughout this thesis.

6.2 Trends over time

6.2.1 National trends

Measured by long-term IB claims, the numbers of young adults affected by sickness-related economic inactivity tripled between 1981 and 2006 (*Figure 6.2*). Relative to their starting point, the changes seen were large: in 25 years, the total caseload increased by almost 52,000 while long-term claimants increased by 88,000. Nor is this a recent phenomenon: the number of young adults claiming IB for six months or more increased almost every year since 1981. Caseload growth was especially marked in the years 1988-1996. In a purely descriptive sense, it was increased duration of claims, rather than increased inflows to these benefits, that drove these rises (*Figure 6.3*). In 1981, 40% of young adults on IB were claiming for more than 6 months, but by 1991 the proportion had increased to nearly three-quarters (74%). This proportion remained relatively unchanged until 2001 then increased slightly to 79% by 2006. With some exceptions, these trends mirror those seen for working-age men and working-age women described elsewhere (see also Anyadike-Danes and McVicar, 2008).

Figure 6.2: Number of young adults (aged 16-24) claiming Incapacity Benefits, all and long-term (> 6 months) claimants: Great Britain, 1981-2006

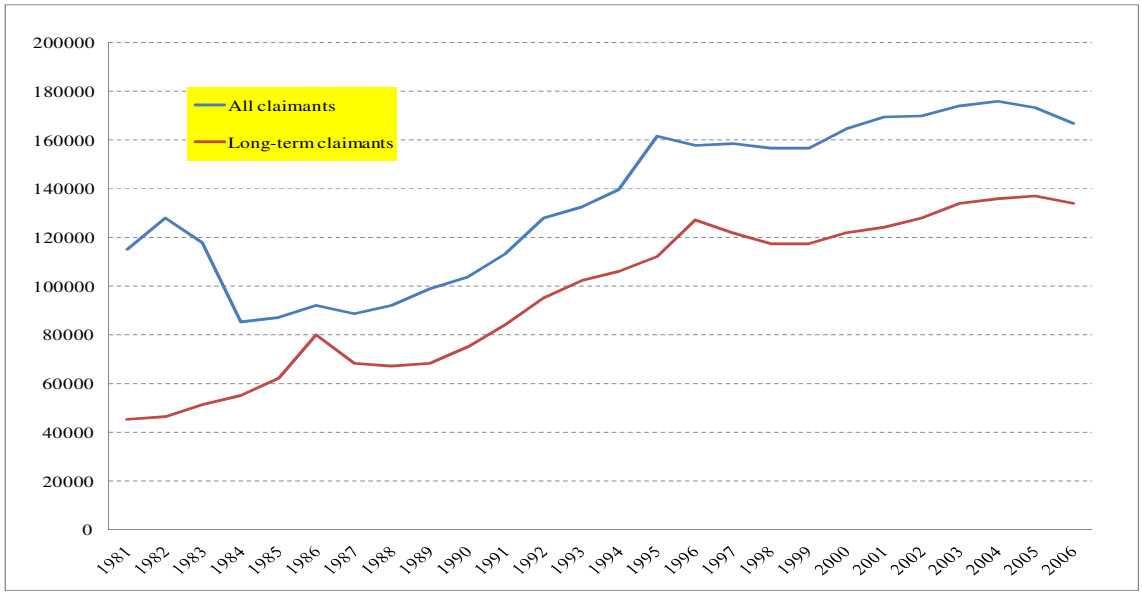
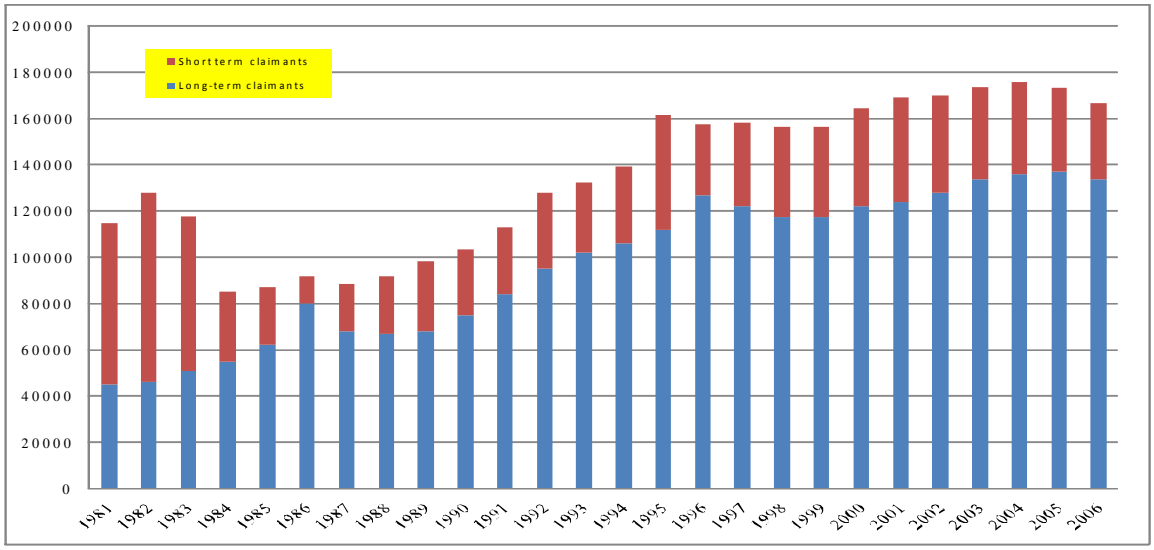


Figure 6.3: Number of young adults (aged 16-24) claiming Incapacity Benefits, short and long-term claimants: Great Britain, 1981-2006



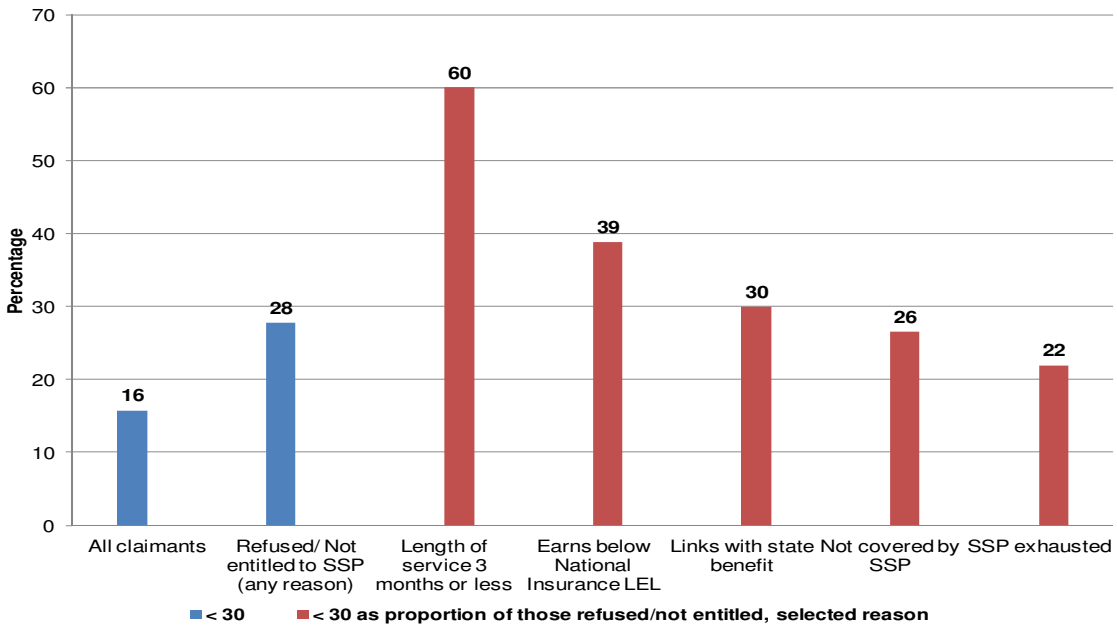
Source: Social Security Statistics; DWP 100% WPLS sample.

Note: Incapacity Benefits include sickness benefit, Invalidity Benefit (IVB) /Incapacity Benefit and Non-Contributory Incapacity Pension/Severe Disability Allowance.

In Chapter 7, the upward trend in young adult sickness-related economic inactivity witnessed from the late 1980s will be considered in much more depth. For now, it may be valuable to explore the reasons behind the brief steep fall in total claimant numbers in the 1983/84 period. In the early 1980s, a majority of young adults on IB (60% in 1981) were claiming for less than six months. Prior to 1983, this group would have been eligible to claim Sickness Benefit from their local Department of Health and Social Security. With the introduction of Statutory Sick Pay (SSP) responsibility passed to employers. This had two effects. First, since the introduction of SSP coincided with a period of very high unemployment, concentrated among young adults, this is likely to have reduced inflows because since many were not in employment. Second, certain categories of employees (including those whose earnings were too low for them to pay national insurance contributions) were excluded from SSP, which is likely to have disproportionately affected the young along with women and part-time workers. Some

evidence for this is provided by data on the reasons recorded for people not entitled to or excluded from SSP in 1983/84 (*Figure 6.4*).

Figure 6.4: Refusals/non-entitlement to Statutory Sick Pay, the impact on young adults (aged under 30): Great Britain, 1983/84



Source: Social Security Statistics, 1% sample; Social Security Statistics, 1984-85

Note: Young adults claiming IB are those aged 16-24. Published SSP data covers the slightly broader 16-29 age group.

Adults under 30 made up 16% of British IB claimants in April 1983, but 28% of new claimants refused/not entitled to Statutory Sick Pay (SSP). Examining the specific reasons for being refused SSP shows that younger people made a disproportionate number of those refused because their *length of service was 3 months or less* (60%), because they earned below the *National Insurance Lower Earnings Limit* (39%) or because they *linked with State Benefit* (30%). As already shown, though, this fall in claims, however, was to prove unsustainable. As a prelude to understanding why this was the case – given the arguments advanced in Chapters 2-5 about local context – it would be useful to look below the national trends in young adult SREI to describe trends in the counties and economic clusters.

6.2.2 Local change in young adult SREI

Administrative (benefits and population) data was combined with the Census of Population to address this gap in knowledge. Local areas are defined in the same way as in Chapters 3, covering 64 counties or (in the case of Wales) combined counties of mainland Britain. Figures for 2000-2006 come from the 100% WPLS dataset, published at post-1996 local authority level and then aggregated up to produce estimates consistent with these larger geographies. For the period 1995-1999, Incapacity Benefits claimants aged 16-24 were drawn directly from a 5% sample published by the DWP, rounded to the nearest 100, again published at local authority level and allocated to counties in the same manner as the WPLS data.

For 1981 and 1991, the process was more complex. For these years, the distribution of young adults describing themselves as *permanently sick/disabled* recorded by the Census was used to allocate long-term young IB claimants across the 64 counties. Table 6.3 shows the difference between the original estimates of IB claimants aged 16-24 for Britain and the sum of the local estimates of IB claimants, for 1981, 1991, 1996, 2001 and 2006.

Table 6.3: How do these local estimates compare to published figures?

	1981	1991	1996	2001	2006
Estimates (for GB)	45,000	84,000	126,906	124,400	133,930
Actual data (for GB)	45,000	84,000	127,000	124,000	133,920
% difference	0.0	0.0	-0.1	0.3	0.0
Absolute difference	0	0	94	-400	-10

Sources: 1981 and 1991 Census of Population; Social Security Statistics; DWP 100% WPLS sample.

Although they are fairly similar, some caution should still be used in interpreting these figures. For 1981 and 1991, the ratio between the Census and Benefits measure is likely to vary between regions and local areas, as for working-age people (see Chapter 3). For the 1995-1999 period, sampling issues, rounding to the nearest 100 and suppression of some figures for small areas are likely to reduce reliability. In particular, figures for the Scottish Islands (Orkney, Shetlands and the Western Isles) for those years should be interpreted with special caution given the small numbers involved. The small discrepancies seen for 2001 and 2006 reflect rounding to the nearest 10, but as the source is a 100% dataset local estimates are likely to be much more robust.

6.2.3 Results

Table 6.4 presents the results of this analysis for the five 'clusters' of counties introduced in Chapter 3. Figures have been rounded to the nearest 100 to improve readability. The estimates suggest that spatial inequalities in young adult sickness-related economic inactivity increased over time. In 1981, 1,700 more young adults were claiming long-term IB in Prospering Britain than in the Conurbations. By 1996, there were 12,400 fewer young adults claiming long-term IB in Prospering Britain compared to the Conurbations. Though this gap subsequently narrowed, it was not enough restore the earlier position. Since the resident population aged 16-24 fell much more steeply over the 1981-2001 period in the Conurbations and Coalfields and Industrial Legacy areas than other parts of Britain, this is likely to have further concentrated the unequal growth in young adult SREI.

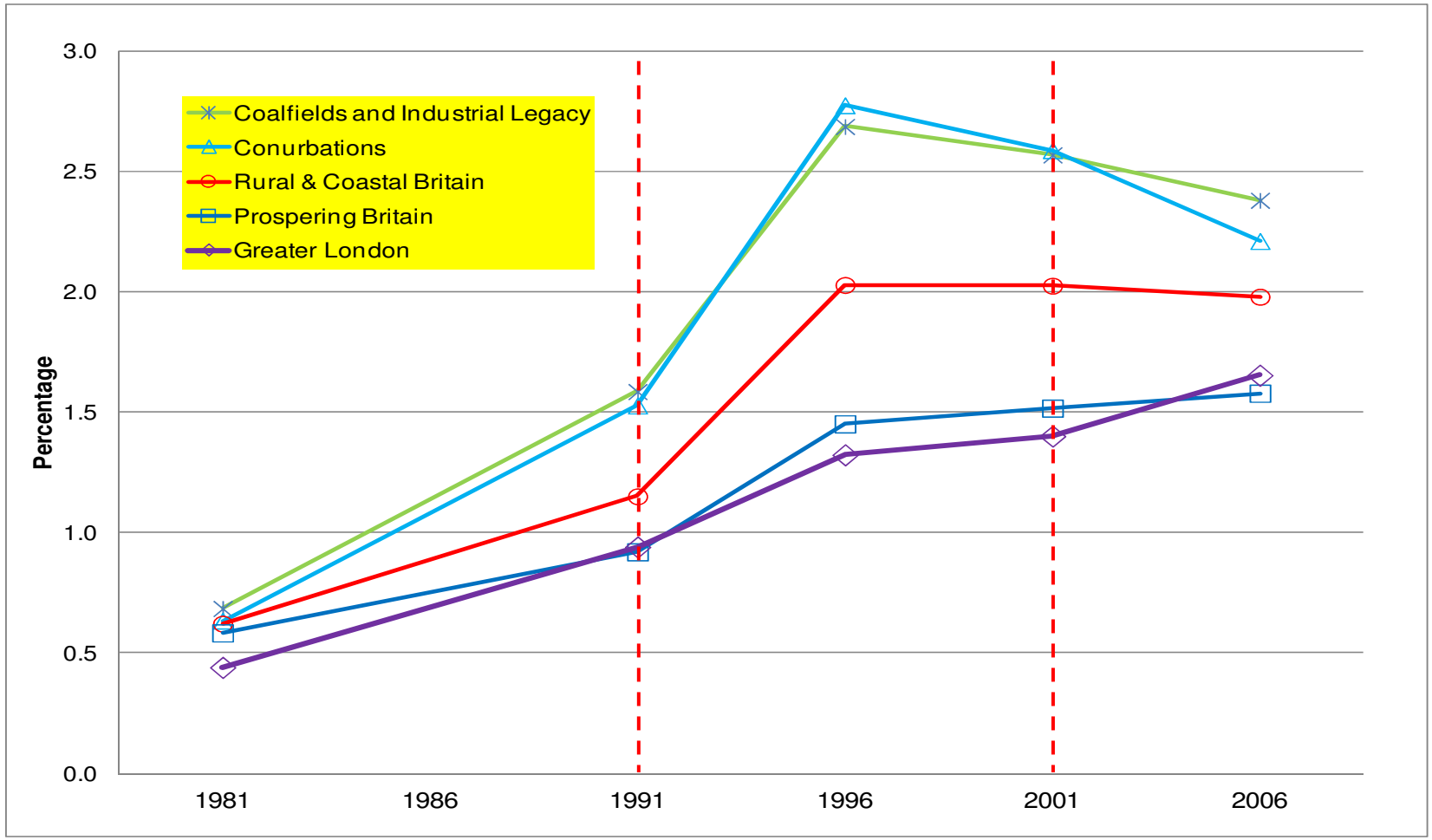
Table 6.4: Young adults (aged 16-24) claiming long-term Incapacity Benefits: economic clusters, selected years

	Census-based estimate		5% sample	100% sample (WPLS)		Absolute change: 1981-06
	1981	**1991**	**1996**	**2001**	**2006**	
Coalfields and Industrial Legacy	7,600	16,200	23,500	22,800	24,000	+16,400
Conurbations	12,600	26,200	43,700	39,700	38,700	+26,100
Greater London	4,400	8,400	11,200	12,300	14,800	+10,400
Prospering Britain	14,300	22,000	31,300	32,700	37,500	+23,200
Rural & Coastal Britain	6,100	11,200	17,200	16,900	18,900	+12,800
Great Britain	45,000	84,000	126,900	124,400	133,900	+88,900

Sources: see Table 6.3.

Another way to consider this is to examine young adult long-term IB claimants as a proportion of the resident population aged 16-24 (*Figure 6.5*). This illustrates the consistently higher rates seen in the Conurbations and Coalfields and Conurbations (peaking at 2.7% - 2.8% in 1996) and the consistently lower rates in Prospering Britain and Greater London. Also clearer are the changing trends through time. All areas saw increases in the proportion of young adults claiming IB between 1991 and 1996, but these were much steeper in the Conurbations and Coalfields & Industrial Legacy areas. Inequality between the latter two areas and Prospering Britain and Greater London peaked in the mid 1990s: by 1996, 1 in every 66 young adults was claiming Incapacity Benefits in more affluent parts of Britain, but in older industrial areas it was less than 1 in every 40. Thereafter, the gap declined: notably between 2001 and 2006, when the percentage of young adult claimants in older industrial Britain fell steeply.

Figure 6.5: Percentage of young adults (aged 16-24) claiming long-term Incapacity Benefits, by economic clusters: 1981-2006



Sources: see Table 6.3.

Analysis of this data at a county level reveals how the problem spread geographically over time. Tables 6.5 and 6.6 examine rates for each local area based on whether they were high (one standard deviation above the British mean) or low (one s.d. below the British mean) for selected years between 1981 and 2006. They illustrate three points. First, some coalmining counties (Durham and Mid Glamorgan-Gwent) had a persistently high percentage of young adults claiming long-term IB relative throughout the whole period. Second, over time the (mainly Coalmining) counties with a higher than expected rate of young adult SREI were joined by the Conurbations: Strathclyde and Merseyside by 1991, Greater Manchester by 1996 and Tyne and Wear by 2001 (*Table 6.5*). Third, those counties with a consistently lower rate of young adults claiming IB over the period were predominantly, though not exclusively, in the Shire Counties of Southern England (*Table 6.6*).

Detailed inspection of SREI for individual counties reveals further evidence of geographical polarization. Considering the 1981-2006 period as a whole, the number of counties with a relatively high rate of young adult SREI increased from five to 15, while the number with a relatively low rate increased from four to 10. However, since 1996, falling young adult rates of SREI in the Conurbation counties (especially in Merseyside and Strathclyde) coupled with rises in SREI in Prospering Britain (especially in Grampian, but also in Gloucestershire and Hereford and Worcester) contributed to the narrowing of the young adult SREI gap seen in Figure 6.4.

Table 6.5: Areas with higher than expected percentage of young adults (aged 16-24) claiming long-term Incapacity Benefits, relative to British average: 1981-2006 (selected years)

1981		1991		1996		2001		2006	
Northumberland	1.36	West Glamorgan	2.70	West Glamorgan	4.72	Mid Glamorgan-Gwent	3.80	Mid Glamorgan-Gwent	3.37
Central	0.97	Mid Glamorgan-Gwent	2.47	Mid Glamorgan-Gwent	4.34	West Glamorgan	3.41	West Glamorgan	2.93
South	0.81	Durham	2.12	Merseyside	4.19	Strathclyde	3.25	Cleveland	2.83
Durham	0.79	Strathclyde	1.99	Strathclyde	3.77	Merseyside	3.23	Durham	2.79
Mid	0.78	Dyfed	1.97	Durham	3.03	Dyfed	2.87	Strathclyde	2.72
		Merseyside	1.83	Greater Manchester	2.90	Cleveland	2.87	Dumfries & Galloway	2.71
		Central	1.80			Tyne & Wear	2.86	Borders	2.60
		South Yorkshire	1.62			Northumberland	2.83	Tayside	2.60
		Cleveland	1.62			Durham	2.80	Isle of Wight	2.59
						Greater Manchester	2.59	Northumberland	2.58
								Highland	2.55
								Shetland Islands	2.50
								Greater Manchester	2.45
								Dyfed	2.44
								Fife	2.42
GB average	0.60		1.20		2.01		1.98		1.92
1 s.d. above	0.75		1.61		2.86		2.58		2.42

Sources: see Table 6.2

*High rate=One standard deviation above GB average *Orkney and Shetlands excluded from the table due to uncertainty of estimates.*

Table 6.6: Areas with lower than expected percentage of young adults (aged 16-24) claiming Incapacity Benefits, relative to British average: 1981-2006 (selected years)

1981		1991		1996		2001		2006	
Greater London	0.44	Wiltshire	0.76	Surrey	1.13	Wiltshire	1.36	Hertfordshire	1.41
Berkshire	0.44	Hertfordshire	0.76	Dumfries &	1.06	Bedfordshire	1.35	Cambridgeshire	1.38
Buckinghamshire	0.43	Buckinghamshire	0.75	Berkshire	0.93	Buckinghamshire	1.26	Hampshire	1.35
Orkney Islands	0.36	Oxfordshire	0.75	Oxfordshire	0.72	Hertfordshire	1.25	Bedfordshire	1.34
		Surrey	0.69	Powys	0.66	Orkney Islands	1.25	Warwickshire	1.33
		Wiltshire	0.76			Cambridgeshire	1.17	Leicestershire	1.29
		Hertfordshire	0.76			Hampshire	1.15	Berkshire	1.24
		Buckinghamshire	0.75			Surrey	1.08	Surrey	1.16
						Oxfordshire	1.03	North Yorkshire	1.14
						Berkshire	0.98	Oxfordshire	1.06
GB average	0.60		1.20		2.01		1.98		1.92
1 s.d. below	0.45		0.79		1.17		1.37		1.42

Sources: see Table 6.2.

Low rate=One standard deviation below GB average

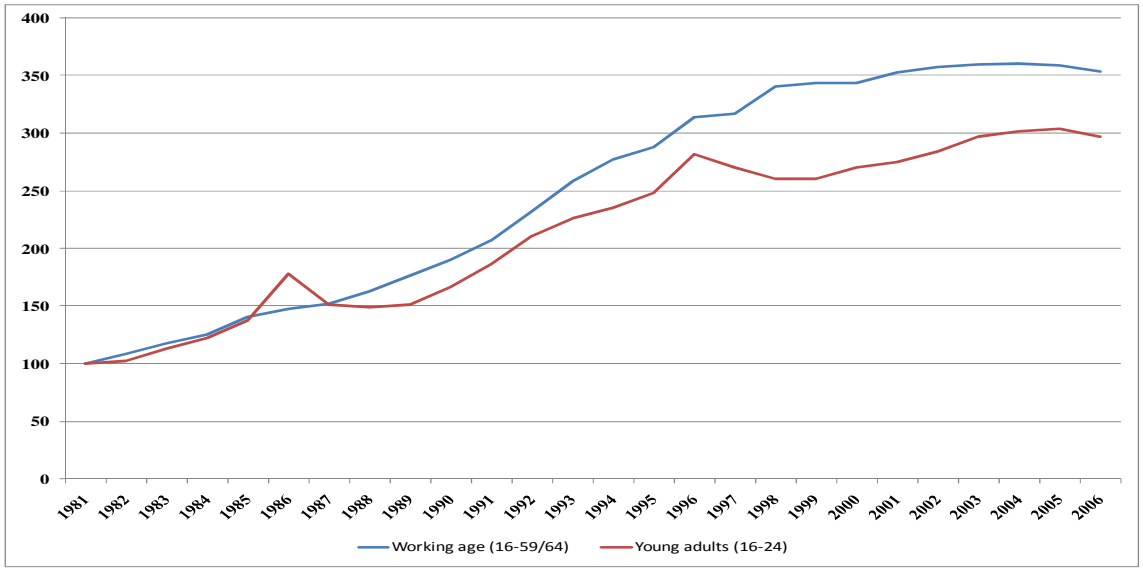
6.2.4 Comparisons with working-age SREI and young Job Seekers

In terms of time trends, the growth in stock of long-term young adult IB claimants can be compared on a like-for-like basis with the working-age group, by converting the absolute numbers to an index (*Figure 6.6*). Until the late 1980s relative annual increases in the stock were almost identical for both groups. Thereafter, the working-age caseload expanded at a faster rate than the young adult stock, with the gap in rate of increase widening further in the late 1990s. There are also two unexplained 'spikes' in the growth of young adult long-term IB claimants in 1986 and 1996. Although these spikes might reflect random fluctuations in the data, they also coincide with policy initiatives that had an important impact on young adults (Restart and the introduction of Job Seeker's Allowance). At this stage the evidence on the association between the benefits regime and caseload growth is left unexplored – this line of enquiry is pursued in Chapter 7. Similar direction and divergence between the caseload time trends hints that factors in the rise in SREI among working-age adults also affected young adults, though to a lesser extent.

Figure 6.7 compares the stock of young adult claimant count unemployment with young adult long-term IB claimants between 1986 and 2006. Throughout the period, the scale of registered unemployment remained a larger challenge than SREI for this age group. It was also much more responsive to the business cycle, falling in the boom of the late 1980s and rising during the 1990-93 recession. However, it is also apparent that the falls in young adult claimant count unemployment have made young adult SREI relatively more pressing. In 1986, there were almost 14 young adults claiming unemployment benefits for every 1 claiming long-term Incapacity Benefits. By 1996, this ratio had fallen to 4: 1 and by 2006 this had reached 2:1. Young adults affected by SREI may have been less responsive to labour market signals than the young unemployed, but the groups were approaching parity in terms of unmet need by the end the century.

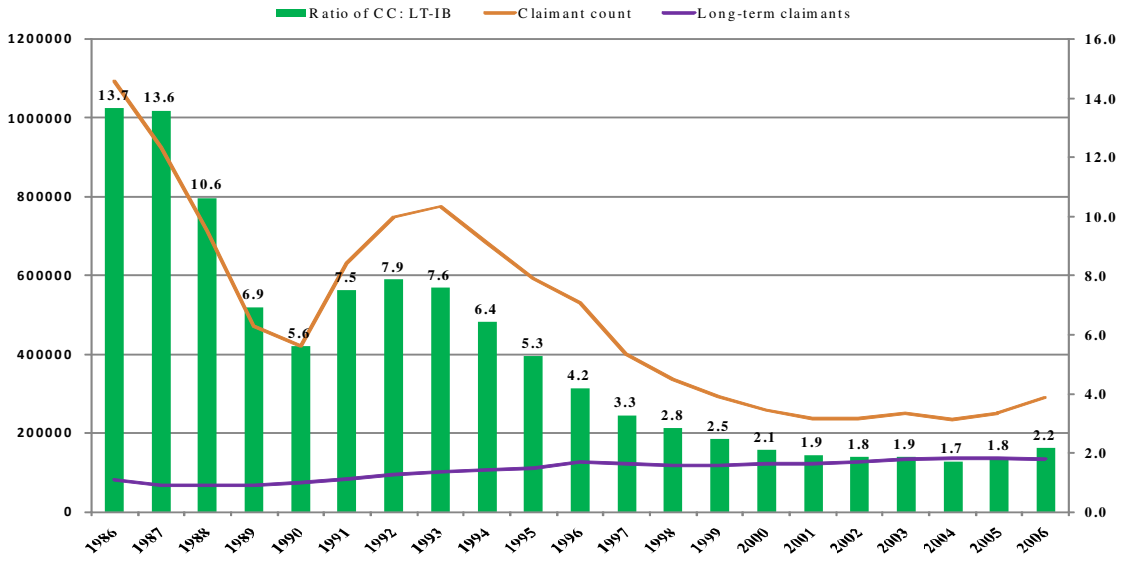
Geographic comparisons can also be made between the concentration of young long-term IB claimants, working-age long-term IB claimants and young Job Seekers. In May 2006, there was a moderate to strong correlation (R square=0.64) between counties with a high proportion of older working-age claimants and those with a high proportion of young adult IB claimants (*Figure 6.8*). When comparisons are made with young Job Seekers, the association is weaker (R square=0.43) but still present (*Figure 6.9*). With some caveats, young adults affected by SREI are more likely to be found in those places with high rates of working-age SREI and youth unemployment.

Figure 6.6: Trends in the stock of long-term Incapacity Benefit (LTIB) claimants, working-age people and young adults compared: Great Britain, 1981-2006 (1981=100)



Source: Social Security Statistics; DWP 100% WPLS sample.

Figure 6.7: Trends in the stock of young LT-IB claimants and young adult unemployment benefit claimants: Great Britain, 1986-2006



Sources: Claimant count statistics; Social Security Statistics; DWP 100% WPLS sample.

Figure 6.8: Association between young adult LT-IB claimants and older working-age (25-59/64) claiming IB: British counties, May 2006

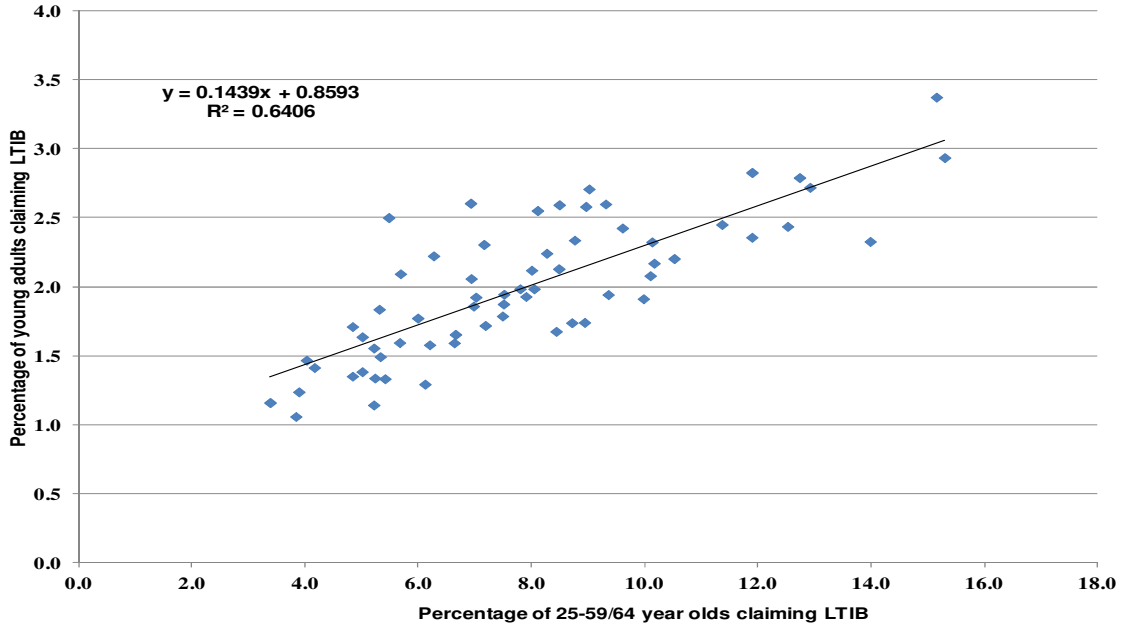
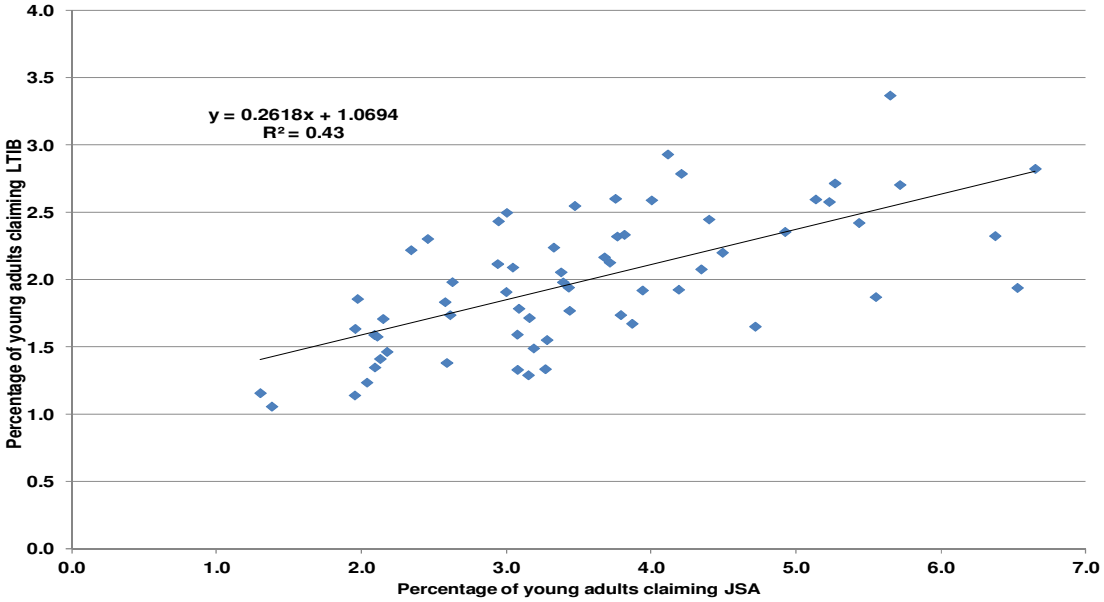


Figure 6.9: Association between young adult LT-IB claimants and young adults claiming JSA: British counties, May 2006



Source: DWP WPLS; ONS; GROS

6.3 Individual employability characteristics

6.3.1 Labour market attachment

This section aims to shed more light on how 'attached' to the labour market young adults economically inactive because of sickness/disability are. On the face of it, the existing literature (McGregor et al, 2003; Kemp and Davidson, 2007) supports an implicit view that young adults on non-active benefits may be in a more favourable position to secure employment than their older peers, mainly because of their attitudes and aspirations. However, while in principal any 'hidden unemployed' among young IB claimants may be competing against working-age adults on similar benefits, they are also likely to be competing against the young unemployed (as well as women returners, people changing jobs, school-leavers, migrants etc.).

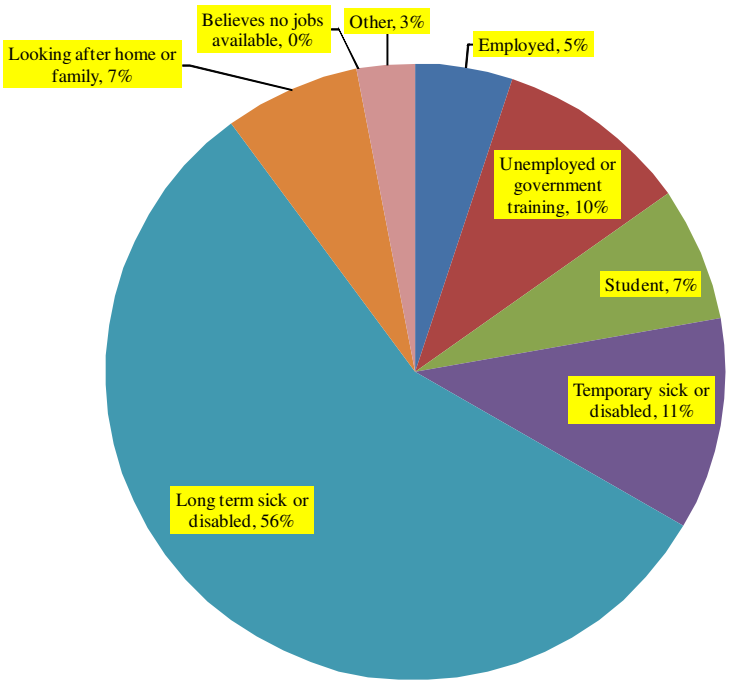
The analysis that follows examines the characteristics of young adults claiming Incapacity Benefits in 2006-07. More than this, it provides direct comparisons of this group with older working-age people (aged 25-59/64) claiming Incapacity Benefits (IB) and with young adults (aged 16-24) claiming Job Seeker's Allowance (JSA).[23] Results from the Quarterly Labour Force Survey are based on eight quarters of data running from January 2006-December 2007. Unless otherwise stated, the geography used is Great Britain.

Earlier it was shown that there was a discrepancy between the number of young adults claiming long-term IB and the number who considered themselves to be long-term or permanently unable to work due to health problems. Using the UK Labour Force Survey, it is possible to shed some light on this. Respondent data for the January 2006-December

[23] Although of course young JSA claimants are only a subset of the 'real' number of young adults who are unemployed and looking for work.

2007 period shows how young adults claiming Incapacity Benefits describe their economic activity (*Figure 6.10*). Health issues, as might be expected, dominate: 56% of those in this age group describe themselves as long-term sick-disabled and another 11% described themselves as temporary sick/disabled. But nearly a third (32%) of young IB claimants report their main economic activity as not linked to health. Notably, one in ten of young adults claiming Incapacity Benefits describe themselves as being unemployed, while one in twenty mention caring responsibilities.

Figure 6.10: Self-described economic activity of 16-24 year olds claiming Incapacity Benefits: Great Britain, Jan 2006-Dec 2007



Source: Labour Force Survey, Jan 2006-December 2007. (First wave interviewees only, n=305). Percentages may not sum to 100% because of rounding.

Table 6.7 contrasts the self-described economic activity of three groups: young IB claimants, older working-age IB claimants and young Job Seekers. Compared to

working-age Incapacity Benefit claimants, young adults claiming IB are less likely to describe themselves as being long-term sick and disabled (56% against 80%). Conversely, they are more likely to describe themselves as unemployed and seeking work or on a government scheme (10% against 3%), temporary sick or disabled (11% against 5%) or as a student (7% against <1%). On the basis of this comparison, it might be argued that young adults on sickness benefits face a more heterogeneous mixture of reasons for their economic inactivity than health reasons relative to the working-age cohort. However, it is reasonable to argue that if young adult IB claimants wish to enter the labour market their most immediate competitors would be young adults claiming Job Seeker's Allowance (JSA). The Labour Force Survey also shows that – unsurprisingly given the conditions attached to JSA – nearly 80% of young adults on this benefit are actively seeking work or on a government training scheme.

Table 6.7: Self-described economic activity by age group and benefits claimed: 2006-07

	IB (16-24)	JSA (16-24)	IB (25-59/64)
Employed	5	3	5
Unemployed/gov't training	10	79	3
Student	7	4	0
Temp. sick or disabled	11	1	5
Long-term sick or disabled	56	1	80
Looking after home or family	7	3	3
Retired	0	0	2
Believes no jobs available	0	1	0
Doesn't need a job	0	0	0
Other	3	9	1
N	**305**	**663**	**6,212**

Source: Labour Force Survey, Jan 2006-Dec 2007 (First wave interviewees only. Percentages may not sum to 100% because of rounding.)

It is also possible to examine the length of time these three groups of claimants have been on benefits (*Table 6.8).* Young adults on IB are much more likely than the working-age group as a whole to have been claiming for shorter periods: a fifth (21%) for less than six

months and one in ten for between six months and a year (11%), compared to 8% and 5% respectively. As a result, young adults on IB will be particularly affected by the Pathways to Work programme that targets new claimants (Anyadike-Danes and McVicar, 2008). The much shorter spells on Job Seeker's Allowance observed for young adults is strongly influenced by the New Deal for Young adults (NDYP), which makes entry into its 'Gateway' programmes compulsory at six months. The period between six months and one year, which accounts for a similar proportion of both young JSA and young IB claimants, raises the possibility of cycling between benefits occurring among this age group: this will be considered in more detail in the next chapter.

Table 6.8: Length of time on benefits by age group and benefits claimed: May 2007

	IB (16-24)	JSA (16-24)	IB (Working-age)
Up to 6 months	21	80	8
6 months up to 1 year	11	16	5
1 year and up to 2 years	13	3	8
2 years and up to 5 years	22	1	19

Source: DWP WPLS 100% sample.

6.3.2 Qualifications and work knowledge base

Direct comparisons with young JSA claimants are not possible, but there is some evidence that those on non-active benefits have poorer literacy and numeracy skills than those claiming Job Seeker's Allowance (Ashworth et al, 2001). Second, a lack of formal qualifications makes it particularly difficult for young adults to establish themselves in the labour market, while having any qualifications has a protective role against poor mental health (OECD, 2008; Parkinson, 2007). Table 6.9 shows the highest level of qualification possessed by the three groups of benefit claimants in 2006-07.

Table 6.9: Highest level of qualifications by age group and benefits claimed: 2006-07

	IB (16-24)	JSA (16-24)	IB (25-59/64)
NVQ Level 4 and above	3	6	10
NVQ Level 3	8	9	7
Trade Apprenticeships	0	1	7
NVQ Level 2	17	22	9
Below NVQ Level 2	23	29	13
Other qualifications	3	3	8
No qualifications	46	29	47
N	**305**	**663**	**6,212**

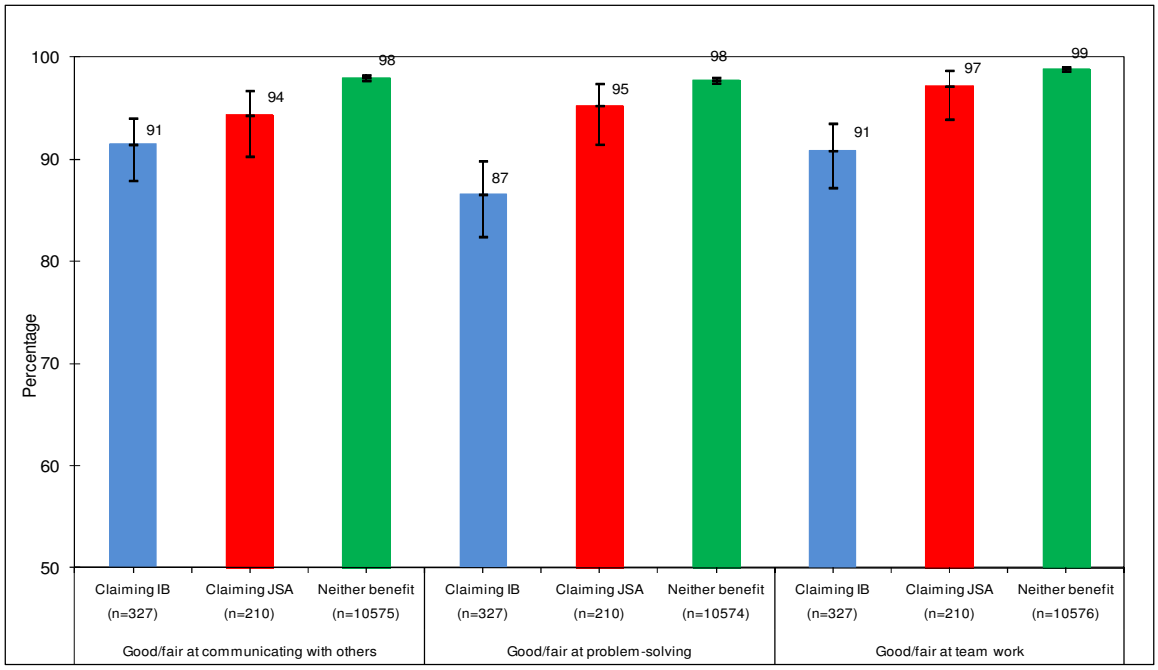
Source: Labour Force Survey, Jan 2006-Dec 2007 (First wave interviewees only. Percentages may not sum to 100% because of rounding.)

The proportion of IB claimants without formal qualifications does not vary substantially by age (*Table 6.9*). While the reasons for this are unclear they are confirmed by other sources (Kemp and Davidson, 2007). Young IB claimants fare badly relative to young Job Seekers: the proportion lacking formal qualifications in 2007 was significantly higher that of those on unemployment benefits (46% against 29%). Almost all young adult IB claimants (88%) have either basic levels qualifications – below NVQ Level 3 – or none at all.

Employability assets cover much more than formal qualifications. In fact, numerous surveys have found that employers rate softer skills, such as communication, teamwork and problem solving, alongside basic numeracy and literacy, as crucial (see Chapter 2 for more on this). Among young IB claimants aged 16-24, a fifth (20%) had literacy problems and 17% had numeracy problems, a higher rate compared to working-age Incapacity Benefits claimants as a whole (Kemp and Davidson, 2007). Although the Labour Market Survey does not attempt to capture these softer skills, the British Cohort Survey 1970 collected some data on soft skills in 1999/00. Compared to those claiming neither IB nor JSA, IB claimants are significantly less likely to rate themselves as either fair or good in terms of their ability to communicate with others, solve problems or work in teams. Teamworking skills and problem-solving skills were also rather better self-

rated by JSA claimants than IB claimants (*Figure 6.11*). Thus there is some evidence that young adults affected by SREI fare poorly in terms of their 'soft' transferable skills.

Figure 6.11: Percentage of British Birth Cohort 1970 rating selected soft skills as good or fair, by whether claiming IB, JSA or neither benefit: Britain, 1999/00



Source: British Cohort Study 1970. Unpublished data based on 29-year (1999/00) study, original analysis for thesis.

Young adults claiming IB tend to have a poorer work history compared to working-age claimants and this is reflected in the type of benefits they receive (Brown et al, 2007). In May 2001, more than half (54%, 91,930) of young adults in this age group were 'credit only' claimants. This means that their national insurance (N.I.) stamp is paid and they gain access to other benefits, typically Income Support with Disability Premium (Brown et al, 2007). By contrast, less than a third of working-age claimants (31%, 840,220) were credits only at the same point in time. Young IB claimants were also were likely to be claiming Severe Disability Allowance (SDA): in May 2001, 32% of claimants in this age group were claiming this benefit compared to 12% of the working-age group. Again, claiming this benefit is indicative of limited work experience. SDA was paid to those

unable to work for at least 28 weeks in a row because of illness or disability but with insufficient N.I. contributions to claim long-term Incapacity Benefit. Since April 2001, there have been no new claims to SDA allowed.

6.3.3 Essential attitudes

This section will explore more subjective aspects of the selected groups' work readiness: their general desire to work; the specific boundaries (in terms of both realism and timescales) they attach to this desire; and for young adults only, their attitudes to work and learning. Around a third of the economically inactive population of the UK, including those on sickness and disability benefits, say they that want work but are not currently looking for it. This figure forms the basis of the Government aim to reduce the caseload of Incapacity Benefits by one million by 2015, so it valuable to know whether it varies by age. Table 6.10 shows the proportion of IB claimants not currently looking but who would like a paid job does not vary substantially by age group. This is however significantly lower than the proportion of JSA claimants not currently seeking work who want employment (35% vs. 28%).

Table 6.10: Not currently looking but want paid employment, by age group and benefits claimed, Great Britain: 2007

	IB (16-24)	JSA (16-24)*	IB (25-59/64)
Yes	28	35	27
No	72	66	73
N	**255**	**97**	**5,693**

Source: Labour Force Survey, Jan 2006-Dec 2007 (First wave interviewees only. Percentages may not sum to 100% because of rounding.)

**Note that this is a subset of total JSA claimants, including only those who did not consider themselves unemployed and seeking work under the ILO definition.*

Respondents to the Labour Force Survey were also asked: *'Do you think you will work in the future?'* The table below compares young and working-age IB claimants' answers to this question alongside those young adults claiming JSA who did not describe themselves as ILO unemployed (and were therefore not currently seeking work). It shows that young adults claiming IB/SDA were considerably more likely to think they would definitely/probably work in future than those of working-age (54% against 23%). However, the table also demonstrates that almost all (92%) young JSA claimants not currently seeking work thought they would definitely/probably work in future.

Table 6.11: Self-assessed likelihood of working, by age group and benefits claimed, Great Britain: 2007

	IB (16-24)	JSA (16-24)*	IB (25-59/64)
Definitely will work in future	31	81	10
Probably will work in future	23	11	13
Probably won't work in future	7	3	16
Definitely won't work in future	19	0	45
Don't Know / Can't say	20	5	16
N	**258**	**115**	**5,743**

Source: Labour Force Survey, Jan 2006-Dec 2007 (First wave interviewees only. Percentages may not sum to 100% because of rounding.)

**Note that this is a subset of total JSA claimants, including only those who did not consider themselves unemployed and seeking work under the ILO definition.*

The LFS also allows respondents to assess when they think they might work. More than half of older working-age IB/SDA claimants (54%) reported they did not know when they might work again, compared to a third (38%) of young adults claiming IB/SDA and 16% of young JSA claimants not currently seeking work. At the other end of the spectrum, more than half of young adults claiming unemployment benefits and not currently seeking work (52%) reported they thought they would work within the next year, compared to 28% of young adults on IB/SDA and less than a fifth (18%) of older working-age people on sickness benefits.

Table 6.12: When thinks might work, by age group and benefits claimed, Great Britain: 2007

	IB (16-24)	JSA (16-24)	IB (25-59/64)
Within the next year	28	52	18
More than 1 year but less than	29	30	25
More than 5 years	4	3	3
Don't Know	39	16	54
N	**191**	**212**	**2,151**

Source: Labour Force Survey, Jan 2006-Dec 2007 (First wave interviewees only. Percentages may not sum to 100% because of rounding.)

**Note that this is a subset of total JSA claimants, including only those who did not consider themselves unemployed and seeking work under the ILO definition.*

Based on the analysis, there is some evidence that young IB claimants may be more optimistic about their chances of working – but also that they are likely to face a great deal of competition from young Job Seekers.

For policy formers, employers and some of those who engage with young adults in the welfare system, the issue is more fundamental: young adults claiming benefits are completely disconnected from the realities of the labour work. Whether through social networks where work is seen as marginal and optional or (more charitably) where despair blinds them to the options open to them, this reinforces and maintains their negative outcomes. For example, it is claimed they often have poor attitudes to work, unrealistic expectations and are reluctant to make compromises to prosper in the labour market (Sunley et al 2006: 107-117).

By using the British Cohort Study (BCS) it is possible to explore this claim in more depth. The analysis presented here uses data from the 1999/00 sweep of the BCS70, when cohort members were aged 29. Respondents are thus slightly older than the

standard definition of a young person used elsewhere in this chapter. However, the cohort would have turned 24 in 1994, at a time when the caseload of young adults on long-term IB was rapidly growing.

What is being tested is whether *young adults claiming Incapacity Benefits in 1999/00 had more negative attitudes to employment and learning* compared to their peers in work, study and other forms of economic inactivity (unemployed, looking after home and family etc.). In the BCS70 1999/00 cohort members were presented with four statements and asked how much they agreed with them, on a five-point Likert scale, from strongly agree to strongly agree. The four statements were:

- *Any job better than being unemployed*
- *If I didn't like a job I'd pack it in*
- *The effort of getting qualifications is more trouble than its worth*
- *It's important to hang onto job even if unhappy*

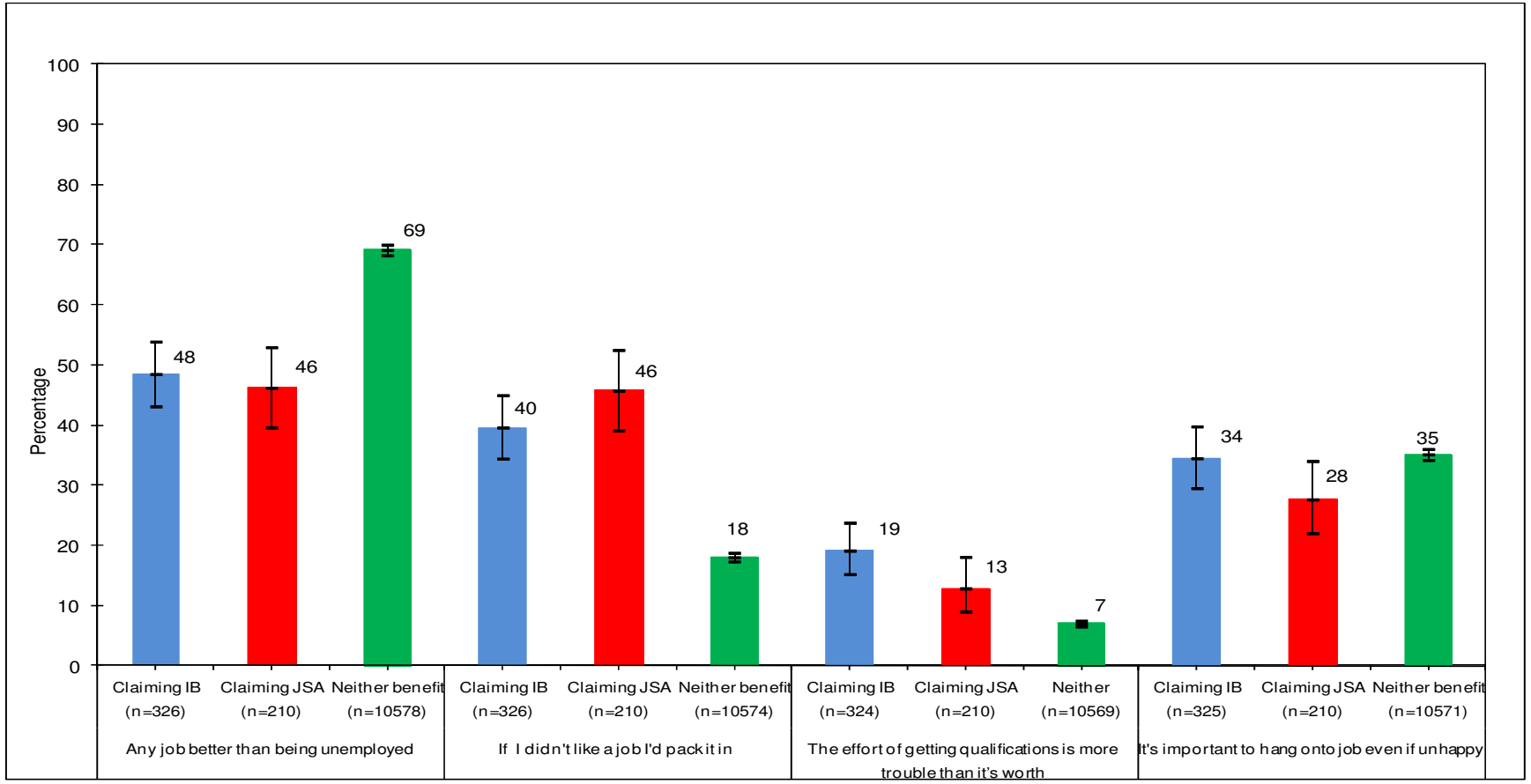
In order to test whether the attitudes of those young IB claimants was significantly different from those not in this position, responses to each question were simplified into two categories (agree/not agree) and the cohort members assigned to one of three categories: claiming IB, claiming JSA and claiming neither benefit (*Figure 6.12*).

Compared with non-claimants, BCS70 members who were claiming IBSDA were significantly less likely to agree that 'any job is better than being unemployed' (49% against 69%), to agree that 'if I didn't like a job I'd pack it in' (40% and 18%) and to agree that 'the effort of getting qualifications is more trouble than it's worth' (19% versus 7%). Only levels of agreement with the statement that 'it's important to hang onto a job even if unhappy' show no difference between these two groups. Attitudes to work and learning among young IB claimants are similar to their peers claiming JSA: only for

belief in the value of gaining more qualifications was there a statistically significant difference, with IB claimants being more likely to agree with this statement. Nonetheless, young adult IB claimants, like their counterparts on JSA, are choosier about the types of work they are prepared to accept and more sceptical about the value of further accredited learning to non-claimants.

Given this evidence, it would be reasonable to factor in these more negative attitudes when engaging with young adults currently affected by sickness-related economic inactivity. However, while accepting this, two important caveats should be borne in mind. First, while they present a challenge for advisors and a risk for employers when dealing with individual young adults, differences in attitudes are unlikely to have been formed in isolation from broader social and economic circumstances. This may include peer group and family experiences, views and expectations, but also the state of the local labour market. Second, even if the percentages are accepted as fixed, this still leaves a significant proportion of young adults affected by in SREI who would like to work or improve their skills.

Figure 6.12: Percentage of British Birth Cohort agreeing with selected statements on work and learning at age 29, by whether claiming IB, JSA or neither benefit: Britain, 1999/00



Source: British Cohort Study 1970. Unpublished data based on 29-year (1999/00) study, original analysis for thesis.

6.4 Health Issues

6.4.1 Why do young adults claim?

By utilising DWP benefits data, it is possible to examine the health conditions of older working-age (aged 25-59/64) and young (aged 16-24) sickness benefit claimants in more detail (*Table 6.13*). For both males and females, *mental and behavioural disorders* were the most common reason given for claiming IB, but their contribution was much more pronounced for young adults than working-age adults. Relative to working-age people, young adults were also much less likely to be claiming because of diseases of the *musculoskeletal system and connective tissue*. Especially for males, young adults were much less likely to be claiming for diseases of the circulatory system, and more males only, more likely to be claiming because of *injury, poisoning and certain other consequences of external causes*. Finally, around 3% of young females were claiming Incapacity Benefits because of pregnancy and associated causes compared to less than 0.5% among the older working-age group.

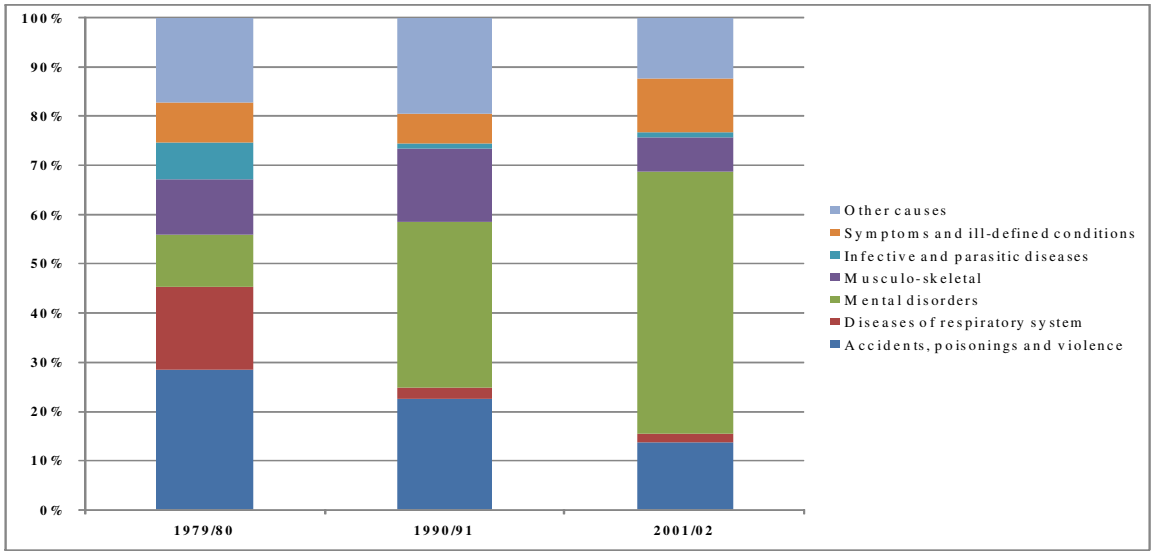
It also is possible to examine the changing reasons for claiming incapacity among different age groups over time, using the methodology favoured by Yuen (2005), which shows the distribution of days of certified incapacity due to sickness/invalidity, by gender and age group. Due to data limitations, results shown here are for young adults (aged 20-29) claiming Incapacity Benefits in Britain at three points in time: 1979/80, 1990/91 and 2001/02. For young men, this period showed a five-fold increase in the relative contribution of mental disorders to the over caseload: from 10.5% of all claims in 1979/80 to 53.4% of claims in 20001/02 (*Figure 6.13*). Data for young women shows a similar trend, with claims for mental health disorders rising from 12.0% in 1979/80 to 53.0% in 2001/02 (*Figure 6.14*).

Table 6.13: IB claimants by main health reason claiming, age group and gender: May 2006

	Men		Women	
	16-24	25-64	16-24	25-59
Certain infectious parasitic diseases (A00-B99)	0.2	0.8	0.4	0.6
Neoplasms (C00-D48)	0.5	1.3	0.6	1.8
Diseases of the blood and blood forming organs and certain diseases involving the immune mechanism (D50-D89)	0.0	0.1	0.1	0.2
Endocrine, nutritional and metabolic diseases (E00-E90)	0.7	1.6	1.1	1.3
Mental and behavioural disorders (F00-F99)	**59.2**	**37.6**	**58.0**	**41.1**
Diseases of the nervous system (G00-G99)	8.6	5.2	8.4	7.4
Diseases of the eye and adnexa (H00-H59)	1.0	0.8	0.8	0.6
Diseases of the ear and mastoid process (H60-H95)	1.1	0.4	1.0	0.4
Diseases of the circulatory system (I00-I99)	0.7	7.9	0.7	3.4
Diseases of the respiratory system (J00-J99)	0.5	2.4	0.6	2.3
Diseases of the digestive system (K00-K99)	1.1	1.7	0.8	1.4
Diseases of the skin and subcutaneous system (L00-L99)	0.2	0.6	0.3	0.5
Diseases of the musculoskeletal system and connective tissue (M00-M99)	**2.3**	**18.6**	**4.5**	**20.1**
Diseases of the genitourinary system (N00-N99)	0.2	0.5	0.7	1.0
Pregnancy, childbirth and the puerperium (O00-O99)	**n/a**	**n/a**	**2.7**	**0.2**
Certain conditions originating in the perinatal period (P00-P96)	0.0	0.0	0.0	0.0
Congenital malformations, deformations and chromosomal abnormalities (Q00-Q99)	2.4	0.8	2.8	1.0
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)	9.8	11.8	11.0	11.5
Injury, poisoning and certain other consequences of external causes(S00-U23)	**9.8**	**6.3**	**3.8**	**3.9**
Factors influencing health status and contact with health services (Z00-Z99)	1.3	1.5	1.4	1.1
Claimants without any diagnosis	0.2	0.2	0.3	0.2

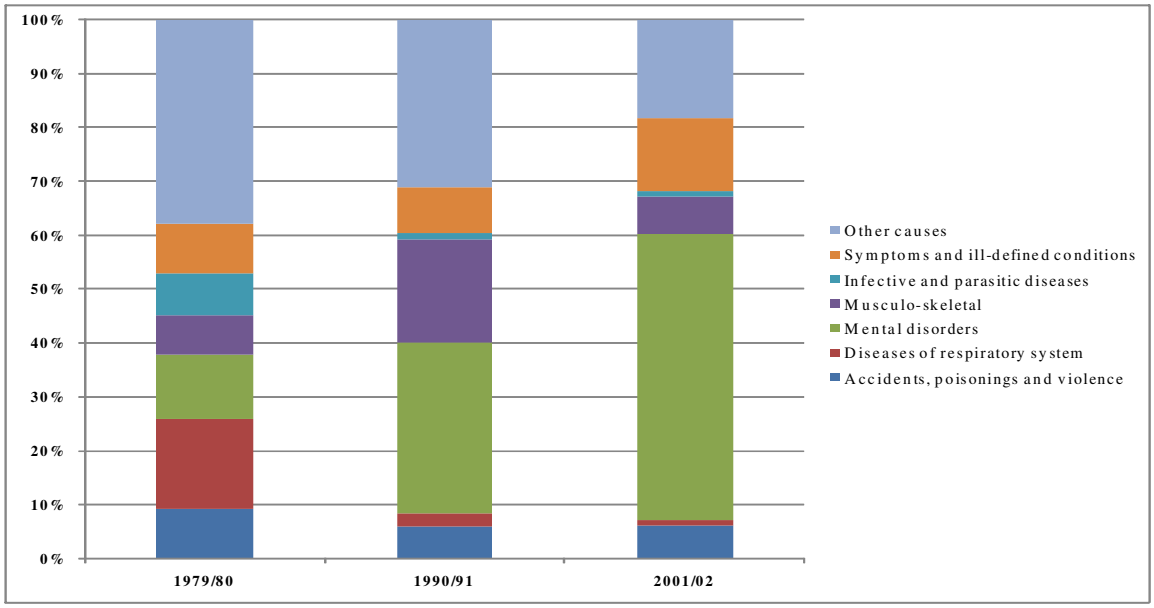
Source: DWP benefit payments 5% data - IB/SDA.

Figure 6.13: Distribution of key causes of incapacity, young men (aged 20-29) claiming incapacity benefits in Britain: 1981, 1991 and 2001



Source: Social Security Statistics; OHE

Figure 6.14: Distribution of key causes of incapacity, young women (aged 20-29) claiming incapacity benefits in Britain: 1981, 1991 and 2001



Source: Social Security Statistics; OHE

6.4.2 Unpacking mental health problems

Understanding the mental health problems faced by young adults on IB more precisely might shed valuable light on their circumstances. The first source used to do this is the British Cohort Study (BCS) 1970. Also known as the BCS70, this began life as a study of ante- and post-natal service provision, perinatal mortality and morbidity, drawing on a cohort of more than 17,000 babies born in Britain in one week in 1970. Over time the BCS70 was gradually expanded into a longitudinal study of the lives of young adults across Britain, with five follow-up sweeps conducted by 1999/00. Chapter 7 exploits the longitudinal aspects of the study in more detail, but for now it can be used to examine the relationship between claiming Incapacity Benefits (IB, SDA or credit only claimants) and two indicators of poor mental health: *the General Health Questionnaire-12 (GHQ-12)* and substance misuse – in particular, problem drug misuse.

Here the chi-square statistic tests whether the proportion of young adults with a high GHQ-12 score (4+) or reporting drug use differs by benefit claimant status. The Chi-square test uses the chi-square statistic to test the fit between a theoretical frequency distribution and a frequency distribution of observed data for which each observation may fall into one of several classes. More specifically, this statistic can be used to determine whether there is any difference between the study groups in the proportions of the risk factor of interest. The p-value (or 'probability') gives the probability of achieving a result as extreme as that found in the sample purely by chance: so for example, a p-value of 0.05 means there is a 1 in 20 chance of obtaining the result by chance. In this thesis tests with a p-value of <0.05 are regarded as statistically significant and the null hypothesis rejected.

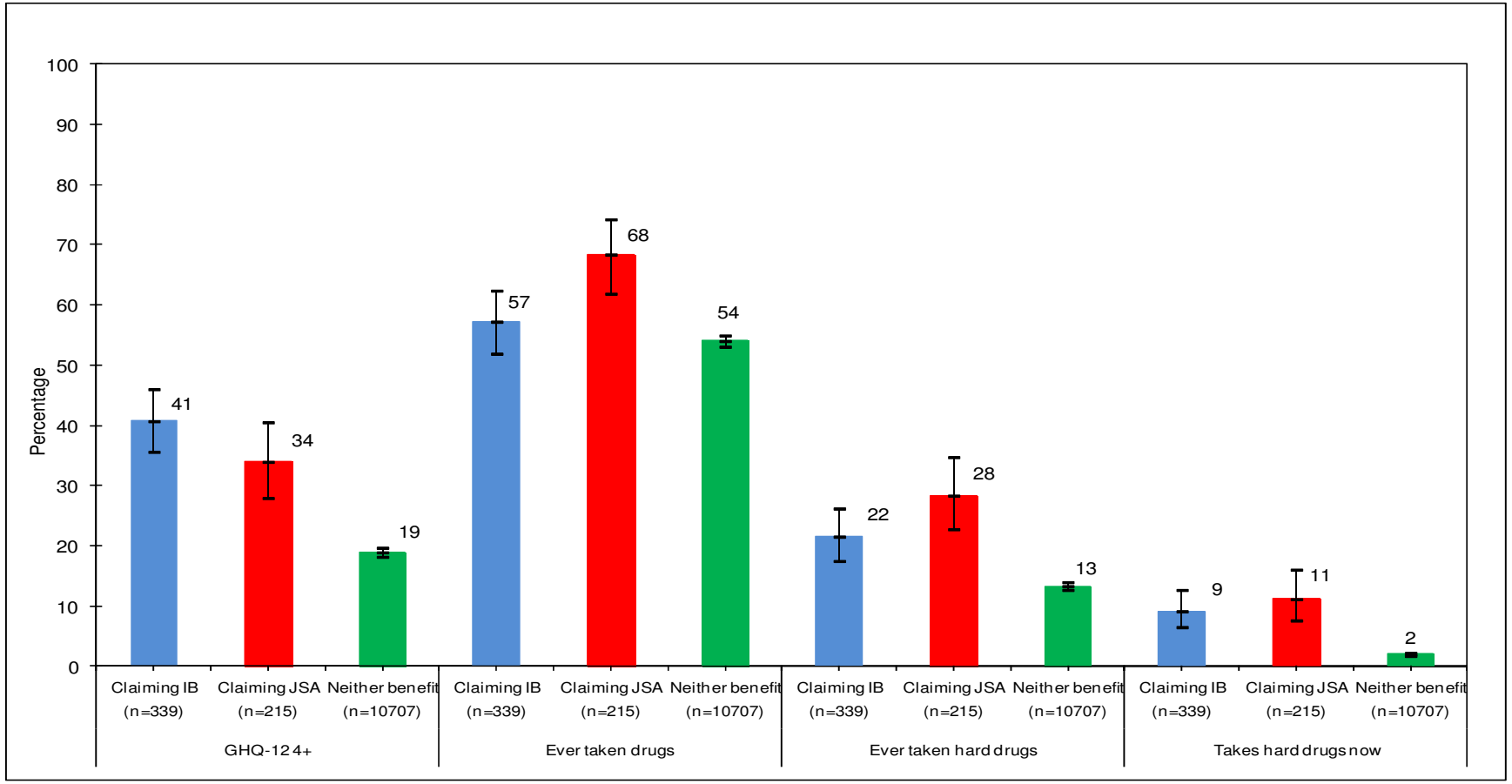
The GHQ-12 uses respondents' answers to 12 questions to measure the extent to which they have common mental health problems. A score of 4+ on the GHQ-12 suggests possible mental health problems, though this does not provide a clinical diagnosis. As

with attitudes to work and learning shown in Figure 6.12, comparisons are made between BCS70 Cohort members claiming IBSDA, JSA or neither benefit, in 1999/00 (*Figure 6.15*). Four in ten (41%) young IBSDA claimants had high GHQ-12 scores, significantly higher than non-claimants (19%) but not JSA claimants (34%).

The BCS70 also asks whether respondents' have tried selected drugs ever, or within the last 12 months (*Figure 6.15*). Among the BCS70 cohort, likelihood of ever using any drugs was not significantly different from non-claimants (57% against 54%, *p=0.24*) and was in fact slightly lower than reported use among JSA claimants. However, both the UK National Drugs Strategy and the recent DWP Strategy focus their concern on a subset: problematic drug users, who use crack cocaine, heroin or methadone. Refining the analysis to check for an association between those cohort members who have ever tried heroin, crack cocaine or methadone and claiming IB reveals a rather different picture. Problematic drug users constitute 22% of the IB group, compared to 13% of non-IB claimants, a significant difference (*p=0.00*). Likelihood of ever or currently using hard drugs did not vary significantly between young IBSDA and young JSA claimants. Similar associations, though with lower rates, held for reported use of hard drugs at the time of the BCS70 1999/00 survey.

Analysis of the BCS suggests the prevalence of common mental health problems are higher among young Incapacity Benefit claimants compared to non-claimants but not relative to JSA claimants. It also suggests use of crack cocaine and opiates may contribute to these mental health problems, though the numbers involved do not account for a substantial number of IBSDA claimants.

Figure 6.15: Percentage of British Birth Cohort with high GHQ-12 scores and by drug use at age 29, by whether claiming IB, JSA or neither benefit: Britain, 1999/00



Source: British Cohort Study 1970. Unpublished data based on 29-year (1999/00) study, original analysis for thesis.

Table 6.14: Numbers and proportions of IBSDA claimants with drug abuse as main disabling condition, by age and gender: Great Britain, May 2001

	16-24		25-49		50-59/64	
	N	%	N	%	N	%
Men	5,710	6.2	21,760	3.1	920	0.1
Women	2,380	3.1	5,270	0.9	190	0.0
Persons	8,090	4.8	27,030	2.1	1,110	0.1

Source: DWP Information Directorate 100% WPLS[24]

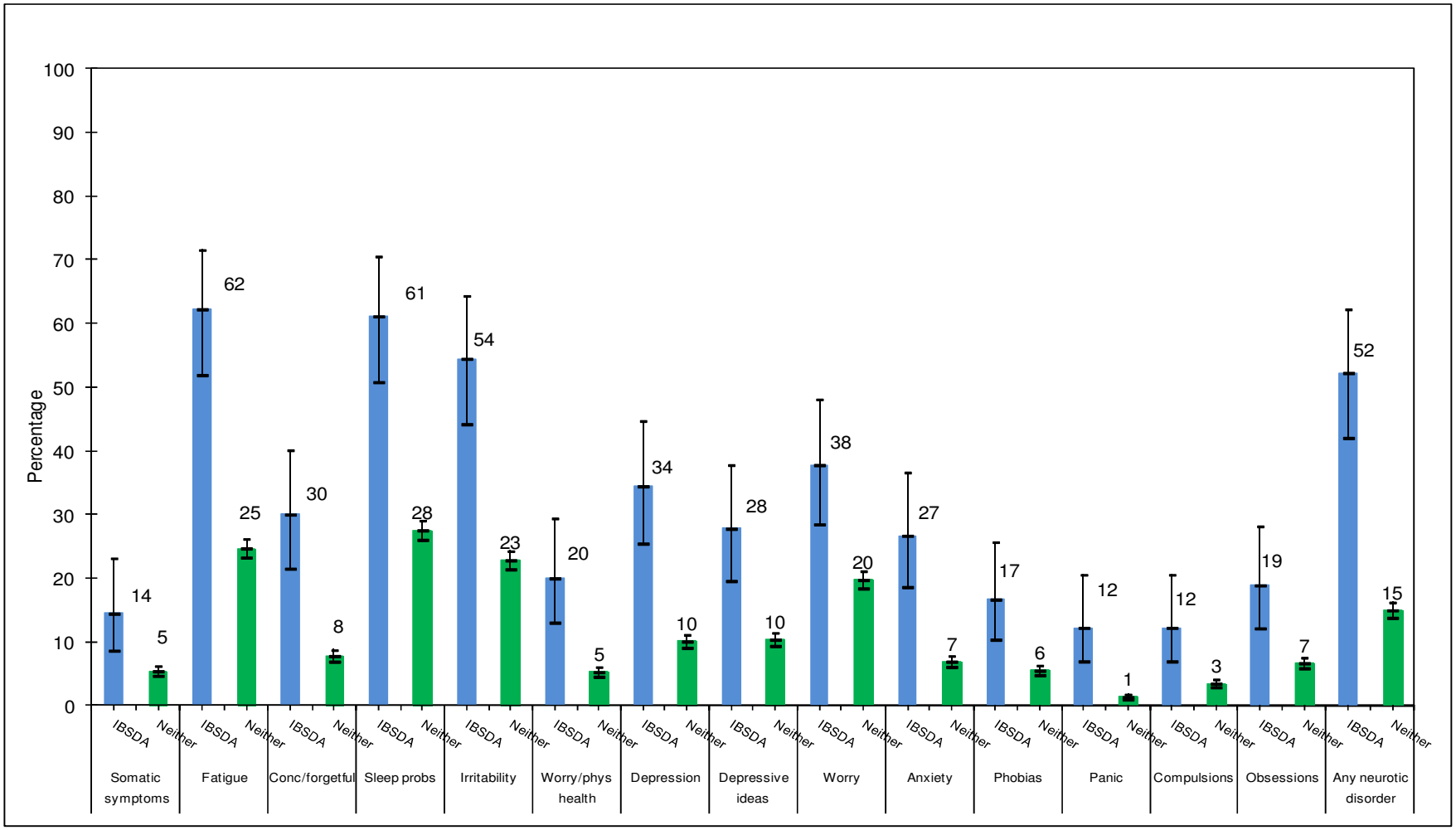
Expanding this argument a little further, bespoke analysis was requested from the DWP to quantify the number of IB/SDA claimants whose reason for claiming was classified to drug abuse, by gender and age group (*Table 6.14*). In May 2001, one in twenty (4.8%, 8,000) of young adults IB/SDA claimants had drug abuse as their main disabling condition, a figure that rise to 6.2% among young male claimants. This is more than twice as high as in the prime-age cohort claiming IB/SDA. Nonetheless, the numbers and proportions involved are small compared to those cited in Table 6.2. More value might be gained by understanding the range of mild to moderate mental health problems that young adults affected by SREI face, rather than a narrow focus on drug abuse.

[24] Causes of incapacity are based on the International Classification of Diseases, 10th Revision, published by the World Health Organisation. To qualify for IB/SDA, claimants have to undertake a medical assessment of incapacity for work which is called the Personal Capability Assessment. Therefore, the medical condition recorded on IB/SDA claim form does not itself confer entitlement to incapacity benefits, so for example, the decision for a customer claiming IB on grounds of drug abuse would be based on their ability to carry out the range of activities in the Personal Capability Assessment.

The source used for this task is the Psychiatric Morbidity Survey 2000, which was designed to provide data on the prevalence of selected neurotic disorders and substance misuse among adults aged 16-74 living in private households in Great Britain (Singleton et al, 2000). To produce more robust estimates (due to small numbers of respondents under the age of 25 who claimed these key benefits in the survey), the age group used is slightly broader: 16-29 year olds. (Although the sample sizes remain small, as noted in Chapter 3: 68 young adults on IB, 45 young adults on JSA, 588 people aged 30-59/54 claiming IB.) Here the focus is on 14 neurotic symptoms (ranging from sleep problems to panic) where respondents experienced symptoms of moderate to high severity in the week before interview: this was measured with a score of 2 or more on the Revised Clinical Interview Schedule (CIS-R). Benefit categories were also created, identifying Incapacity Benefits claimants (those claiming Incapacity Benefit, Severe Disability Allowance or Income Support claimants also reporting a long-term illness) and JSA claimants.

The first round of comparisons focuses simply on 16-29 year old respondents to the survey, looking at what distinguished IB claimants in this age group from JSA claimants and non-claimants. Although the non-claimant group are likely to be very heterogeneous, this approach does give some idea as to the relative extent of key mental health problems recognised by the welfare state. Chi-squared tests were used to test for significant differences between categories. Figure 6.16 shows that young IB claimants are significantly more likely than young adults not claiming JSA or IB to exhibit scores of 2+ and therefore symptoms of severe to moderate severity across a wide range of neurotic symptoms, notably fatigue, sleep problems and irritability. One in every two (52%) have any neurotic disorder, compared to 15% among the general population aged 16-29, a significant difference. Also included are depression (*34% vs. 10%*, p=0.00) and anxiety (*27% vs. 7%*, p=0.00), which are known in the literature to be good markers of mental health problems. Differences in rates were significant for all the symptoms examined.

Figure 6.16: Proportion of 16-29 years with CIS-R symptom score of 2+, IBSDA claimants vs. those not claiming any benefits: GB, 2000



Source: APMS 2000. Original Analysis for thesis.

The second round of comparisons looks at how young IB claimants compare to older working-age Incapacity Benefit claimants (aged 30-59/64) and young JSA claimants (aged 16-24). Prevalence of any neurotic symptoms among IB claimants did not vary significantly when young claimants were compared to this working-age cohort (*Table 6.15*). The only observed difference for individual symptoms was for irritability, with 54% of young claimants showing this symptom compared to 41% of the working-age group as whole.

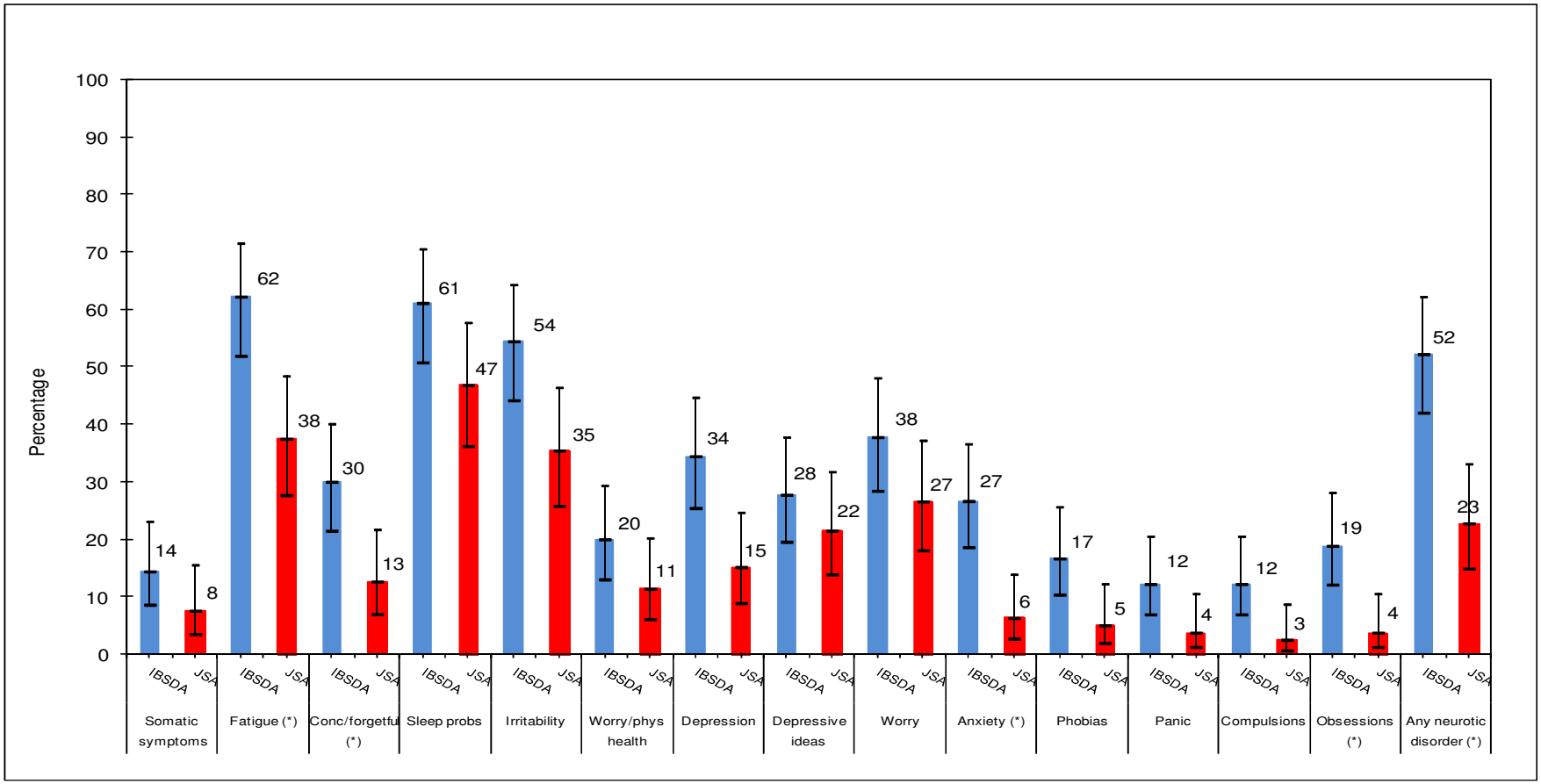
Table 6.15: Proportion of IB claimants with a score of two or more on each CIS-R symptom, 16-29 and older working-age (30-59/64) claimants compared: Great Britain, 2000

	16-29	30-59/64	p-value
Any neurotic disorder	52	53	0.96
Irritability	**54**	**41**	**0.02**
N	68	588	

Source: APMS 2000. Original Analysis for thesis.

For young JSA claimants, a more nuanced picture is observed. Young adults claiming IB were significantly more likely than young JSA claimants to have **any** neurotic symptoms of mild to moderate severity (52% against 23%, p=0.00). This is driven especially by differences in symptoms of fatigue, concentration/forgetfulness, anxiety and obsession (*Figure 6.17*). However it is also noteworthy that there are many symptoms where the benefit claimed does not make a difference in the symptom prevalence for this age group, for example depression or irritability.

Figure 6.17: Proportion of 16-29 years with CIS-R symptom score of 2+, IBSDA claimants vs. JSA benefits: GB, 2000



Source: APMS 2000. Original analysis for thesis. (*) indicates statistically sig. difference.

Note: IB claimants include IS claimants with a long-standing illness, plus those claiming Incapacity Benefit or Severe Disability Allowance.

6.5 Conclusions

6.5.1 Main points

1. *How did sickness-related economic inactivity among young adults in Britain change between 1981 and 2006: nationally, in the clusters and in the counties?*

Depending on the measure used, young adult SREI in Britain increased by 60,000 - 90,000 between 1981 and 2006. Wider discrepancy between different measures hints at this age group's greater susceptibility to changes in administrative rules, fluidity in self-perception and more heterogeneous nature compared to older working-age SREI. Focusing on the benefits measure, like working-age adults, the national rise was especially concentrated in the 1988-1996 period and largely driven by lengthening claim duration. It was also spatially concentrated: while all areas saw rises, increases were much steeper in the Conurbations and Coalfields & Industrial Legacy areas than in Rural & Costal Britain, Prospering Britain and Greater London. To illustrate the change at a county level, Strathclyde and Merseyside had an estimated 1 in 167 young adults claiming IB for more than six months in 1981 but by 2006 this had risen to 1 in 40.

In addition, as for working-age people, there is evidence of polarisation: the number of counties with average rates of young adult SREI fell from 55 to 39, while the number of counties with especially high or low rates increased from nine to 25. There is some evidence that young adult polarisation in SREI declined between 2001 and 2006, though the real break may have occurred in the late 1990s. Growth in young adult SREI was, like working-age SREI, particularly concentrated in space and time.

2. *What are the characteristics and attitudes of young British adults affected by SREI?*

Although nearly a third think they will work within the next year and a similar proportion attribute their IB claimant status to non-health issues, young adult IB claimants are

disadvantaged in terms of health, skills and attitudes towards work and learning. These health problems are real and substantial. Validated survey measures, such as the Revised Clinical Interview Schedule (CIS-R) and the GHQ-12, suggest around 40-50% of young adult IB claimants have mental health problems, almost identical to the prevalence suggested by administrative data. Among the young adult population claiming neither IB nor JSA, the figure was around 15-20%. Drug misuse, which affected around 5-12% of young adult IB claimants depending on the measure used, only partially accounts for this difference. Young adults affected by SREI are also less likely to have formal qualifications: two-thirds have qualifications below NVQ level 2 and almost half possess no formal qualifications at all. Soft skills, as measured by self-rated communication, teamwork and problem solving skills also compare unfavourably with young adults not on benefits and (less strongly) young JSA claimants. Attitudes towards the quality of jobs on offer and the value of gaining more qualifications are also less positive than young adults not claiming benefits. Such problems may be compounded by the fact they are often found in local labour markets with higher levels of young adult claimant unemployment and working-age SREI.

3. *How do young British adults affected by SREI compare with the young adults claiming Job seeker's Allowance (JSA) and older working-age IB claimants?*

The numbers involved and rates remain relatively low compared with working-age adults as a whole and compared with those young adults affected by unemployment. Comparison of survey and benefits data suggests young adults claiming IB are less likely than older working-age adults to see health as the main reason for their current economic status (though a majority still cite long-term health problems as a reason for claiming). Mental health problems are more dominant among young adult IB claimants compared with older working-age claimants, where the balance between mental and physical health problems is more even. Pregnancy among young women and external causes (often related to violence) are also cited. There is also some evidence that the shift away from physical complaints occurred earlier in the younger age groups.

Despite their age, young adults affected by SREI have more in common with older working-age adults in this position than with the young unemployed. They are closer to the older working group in terms of time trends, geography, skill levels and their general desire to work. Some differences occur in their more complex range of personal circumstances, greater prevalence of mental health problems (including drugs) and, perhaps beneficially, desire to work and greater specificity about the timing of this. By contrast, they are disadvantaged compared to young Job Seekers in terms of skills, some mental health problems (especially neurotic disorders, though not drugs) and specificity and desire to work, have equally negative attitudes to work and learning and tend to be concentrated geographically in the same places. Young adults affected by SREI are no better placed than older working-age IB claimants to compete for job opportunities. Their most immediate competitors (young Job Seekers) are much closer to the labour market in terms of skills and health problems. Even before the downturn, there were more young Job Seekers for employers to choose from. As such, the challenges in re-engaging this group should not be understated.

6.5.2 Discussion

This chapter has described the main characteristics of young adults affected by SREI in Britain and how the magnitude and distribution of this issue changed between 1981 and 2007 at a national and local level. They are a particularly disadvantaged group.

Mental health is a crucial factor in understanding young adult SREI: but mental health should be properly understood as being shaped at least as much by the circumstances in which people live as much as their biological predispositions and the choices they make. The recently-developed framework of mental health indicators for Scotland included individual, community and structural measures alongside more traditional markers of morbidity and mortality (Parkinson, 2007). This tallies with the view that: *"Mental health is produced socially: the presence or absence of mental health is above all a social indicator and therefore requires social, as well as individual solution"* (Friedli, 2009: v).

Shared characteristics with other disadvantaged groups in the labour market prompts questions about why such similarities occur. The family unit must be a key candidate in explaining this, since there is clear evidence that parental background remains very important in determining health outcomes, educational attainment and labour market success in early adulthood (Byner et al, 2002). It remains unclear to what extent their more negative attitudes to work and learning are 'acquired' from peer groups or family (see Chapter 2 for more on this), but arguably local labour markets play a role. Growing geographical polarisation of young adult SREI in the 1980s and 1990s is consistent with the widening spatial inequality seen for working-age adult inequality in Chapters 4 and 5. Post-2000 reductions in young adult SREI seen in older industrial areas (in contrast to the either static or increases seen in more prosperous areas) are also consistent with trends seen for working-age adults (Simmons, 2009; Dorling et al, 2007). More detailed inspection of the family background and labour market opportunities for young adults, disaggregated by time and place, might prove valuable here.

Of contemporary relevance, given the rapid rises in unemployment seen in Britain since 2008, are the comparative prospects of young JSA claimants. There is a solid body of evidence that young, unskilled workers are particularly exposed to the risk of unemployment and that the experience of early unemployment has long-term scarring effects on future health and labour market prospects (Bell and Blanchflower, 2009). The current recession is no different from its predecessors in its likely victims. What this chapter confirms is the very poor mental health experienced by young JSA claimants. Some factors associated with mental health problems even may be higher among JSA claimants than those on Incapacity Benefits (Hay and Bauld, 2008). The risk is that a fresh round of 'benefit shift' may be encouraged through these processes. While some young adults may flow from IB to JSA, the current economic climate may also encourage flows in the opposite direction. Consideration of the interaction between benefits, non-employment and mental health problems is thus of urgent importance for this age group (Mitchell et al, 2002).

In order to describe young adult SREI, the chapter has focused on the individual characteristics of those affected. However, the evidence suggests that attention should also

be paid to wider factors. As such, examining a mix of structural factors (such as the labour market and welfare regime) and intermediary factors (family composition, social class) alongside individual measures may be a useful way forward. The next chapter attempts to address these issues.

Chapter 7 Young adults and SREI: Explaining the growth

7.1 Introduction

7.1.1 Background

The last chapter showed that young adult sickness-related economic inactivity (SREI) increased by 60,000 – 90,000 (depending on the measure used) in Britain between 1981 and 2006. Why should this be? For working-age people, especially older men previously working in industry, job destruction and the 'hidden unemployment' thesis (see Chapter 2) is likely to have played a role. Some commentators argue that this is less plausible for young adults, since their age shielded them from the direct consequences of deindustrialisation in the 1970s and 1980s (Turner, 2008). In addition, expanding opportunities for young adults in Higher Education in the 1990s had dual benefits, benefiting participants directly and easing the competition for jobs in the rest of the youth labour market. Nor, in this account, can it be attributable to a lack of labour market opportunities for young adults. Steady growth in the British economy since the early 1990s, and continued job creation since 1997, is cited to support this view (Field and White, 2007). Finally, long-term youth unemployment was, it is claimed, *"virtually abolished"*, principally through the New Deal for Young People (DWP, 2008:11).

There is also some scepticism about the work-limiting effects of the health problems that these young adults face. Many health problems (from psychosocial health and general health to obesity and high blood pressure) show prevalence increasing with age (Bromley et al, 2005; Singleton et al, 2001). Hidden unemployment among young adults is regarded partly, and unemployment among young adults almost wholly, as being voluntary. The real causes of young adult SREI, it is suggested, lie in household effects (growing up in households where no-one has ever worked), a malfunctioning benefits system and in the growth of self-inflicted health problems, especially drugs and alcohol (Doughty, 2006; Frost, 2006).

This chapter aims to shed light on this mystery. Its first part tests three broad propositions. First, these changes cannot be attributed to weaknesses in labour market demand for young adults. Second, a malfunctioning welfare system encouraged young adults with few

marketable skills to move onto Incapacity Benefits. Third, young adults moving into sickness-related economic inactivity in the 1990s were more likely to be the children of men who became detached from the labour market in the 1980s and early 1990s. A fourth proposition, that individual characteristics (poor skills, low work ethic and substance misuse) played an important role, has been touched upon in the previous chapter. While the sections that follow treat each assertion as discreet, in practise they are likely to overlap and reinforce one another in a variety of ways, as described elsewhere (Sunley et al, 2006: 56). The chapter will then examine the relative strength of structural, family and individual characteristics in explaining this change, using multiple logistic regression.

7.1.2 Methods and data sources used

In brief, the questions to be addressed in this chapter can be formulated as follows

- How did the youth labour market in Britain change nationally and locally in Britain between 1986 and 2006 and what are the implications for the 'collapsed labour market' thesis?
- Did the national generosity of Incapacity Benefits (IB) for young adults increase in absolute and/or relative terms between 1981 and 2001?
- Did outcomes of the benefits system vary between economic clusters and counties?
- Were there any associations between likelihood of claiming IB as a young adult and family factors (parental employment, social class, family fragmentation and area of residence) at age 16?
- What structural, family and individual factors were most strongly associated with likelihood of claiming IB at age 29?

Given the complexity of the challenge, within-method triangulation was used to improve depth and breadth of understanding of the issues driving this phenomenon. (See Chapter 3 for a discussion of triangulation as a method in general). In the first part of the chapter, *theoretical* triangulation is used to explore the relevance of structural (labour market and the welfare system) and family factors to the growth of sickness-related economic inactivity

among young adults. In a similar way to Chapter 4, theoretical triangulation also allows a useful organising strategy for exploring the main viewpoints. As each viewpoint is discussed in turn, data triangulation is employed to describe changes through time and where possible local differences that shed light on the subject.

In the second part of the chapter, logistic regression is applied to a single dataset (The British Cohort Survey 1970) to test the relative importance of structural, family and individual factors in the growth of young adults claiming Incapacity Benefits. Using a single dataset to complement the first part of the chapter partly overcomes the difficulties in comparing 'like with like', since it is made up of common units of observation (cohort members). Table 7.1 summarises the data sources used in this chapter and their specific strengths and limitations.

Table 7.1: Main data sources used and summary of strengths and limitations in understanding sickness-related economic inactivity among young adults

Section	Sources used	Strengths	Limitations
Labour market	Labour Force Survey	Largest regular government survey Useful breakdown of economic activity	Self-classification No comparable data pre-1984 (though GB estimates for unemployment created for 1971-1983 period) Other discontinuities Data on Incapacity Benefits not collected until 1990s
	Census of Population	See Chapter 2	See Chapter 3
Welfare regime	Social Security Statistics; DWP Statistics	With care, it is possible to construct long runs of time series data and observe change over time	Caseload size may be driven by take-up and changes in benefit rules rather than real change
	New Earnings Survey	More accurate than LFS/APS because drawn from employers' PAYE tax records	Under-samples workers with low earnings Limited data on individual and job characteristics
	Benefit Leavers Survey 2004	Most recent source of data of destinations for people leaving non-active benefits (last one the 1996 leaving IB survey); only dataset with sub-regional flag	Point in time: *national* estimates exist for 1996, 2003 and 2004 Dependent on respondents' ability to recall events (interviewed 4-5 months after events) Limited sample power at a sub-regional level
Family effects	British Cohort Study 1970 (BCS70)	Can be used to test propositions about cause and effect more precisely	Unweighted data; cohort members may become less representative of population over time because of attrition

7.2 The Labour Market for Young Adults in Britain

7.2.1 Two views of the labour market

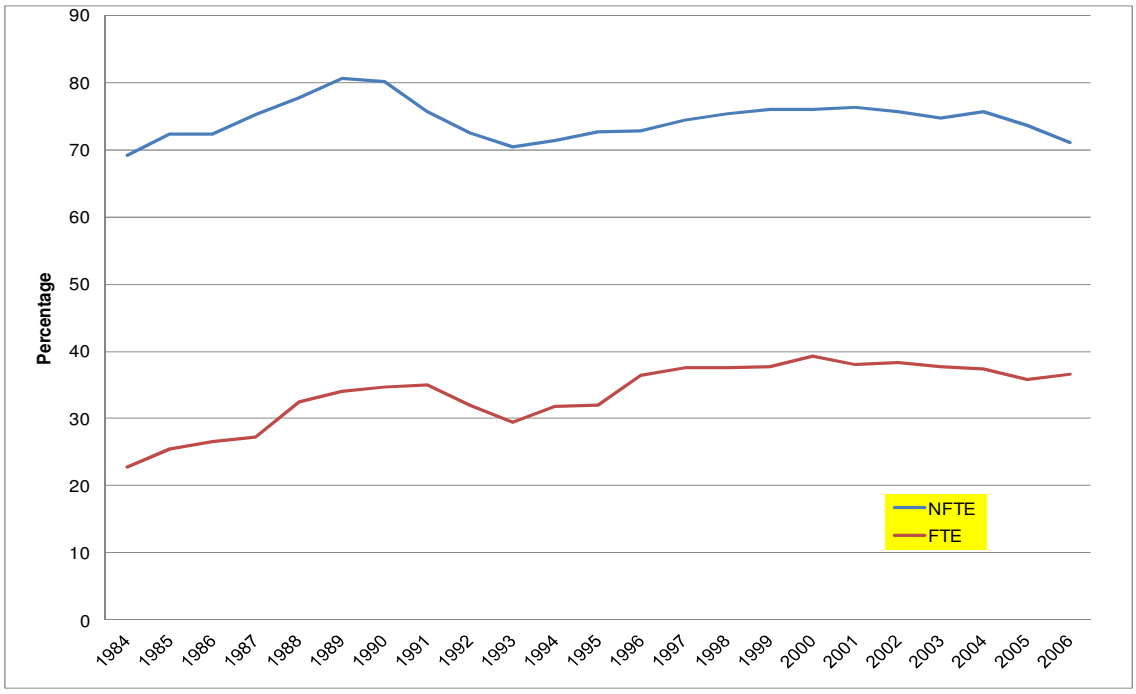
The first proposition to be tested is that labour market demand is not a problem for young adults, and therefore had little bearing on the growth of sickness-related economic inactivity. The view favours the adaption theory of the youth labour market and rejects the collapsed youth labour market introduced in the literature review (see Chapter 2, section 2.2). Of course, these two descriptions of the youth labour market might well be complementary, with an increasing division towards those who moved from school to Further and Higher Education and those who took their chances in the labour market as soon as possible. Nevertheless, while Chapter 4 and 5 have presented some clear evidence on ongoing labour market weaknesses for working-age people (especially men in the former industrial heartlands of Britain), perhaps the situation is different for the young. This section will draw mainly on a large scale routine survey (the Labour Force Survey) to examine the evolution of employment prospects for young adults (aged 16-24) in Britain since the mid-1980s.

7.2.2 National and local trends in employment

Figure 7.1 shows employment rates for young adults aged 16-24 in Britain between 1984 and 2006, with those in full-time education (FTE) and not in full-time education (NFTE) shown separately. It is important to make this distinction because of the large increase in young adults prolonging their full-time education in Britain over the last 20 years. Although the expansion of Higher Education in the 1990s meant new opportunities for a large number of young adults the gains should not be overstated. Participation remained skewed towards the middle classes: half of 18-21 year olds from a non-manual background were in full-time Higher Education in 2001, compared to a fifth of those from a manual background – and the participation gap actually increased slightly over time (Gorard, 2005). It should also be remembered that despite deindustrialisation and social change, between a third and a half of adults in Britain are defined or self-define as working class.[25]

[25] In 2006, 31.5% of adults were classified as from a routine or semi-routine background (LFS, April-June); 56% of adults considered themselves working class in the 2005 British Social Attitudes Survey.

Figure 7.1: Employment rates for young adults aged 16-24, those in full-time education (FTE) and not in full-time education (NFTE): Great Britain, 1984-2006



Source: Historical Quarterly Supplement, Spring Quarters, 1984-2005; April-June Quarterly Labour Force Survey, 2006

Figure 7.1 shows that for young adults not in full-time education (NFTE), employment rates rose from a low of 69% in 1984 to a peak of 80% in the late 1980s then fell back to 70% in the trough of the 1990s recession. Rates subsequently recovered to fluctuate around 75% between 1998 and 2004: they then fell again, reaching 71% by 2006. These trends should be considered alongside a government target of 80% employment rates (and note these figures pre-date the onset of the current recession). It is possible that the growing number of students who also worked 'crowded out' some of their peers not in full-time education from available employment opportunities (Furlong and Cartmel, 2007:43). Munro et al (2009) cite literature to show employers in cities often choosing to fill part-time vacancies with student labour, though there is less evidence of direct displacement and local labour demand plays a more important role in determining student employment rates.

Labour market demand can be understood in a number of ways. At a firm level, employers may be less willing to recruit young adult benefits claimants because of negative perceptions (sometimes based on experience). Sunley et al (2006) found that even in buoyant local labour markets, employers were reluctant to take on young unemployed people because of their presumed 'lemon' status. Recent DWP research has also found evidence of informal age discrimination against younger people, with those under 22 most affected (Metcalf and Meadows, 2006). Such processes may make displacement by more marketable competitors (young adults still in or just leaving full-time education, women returners and in some places economic migrants) much more likely.

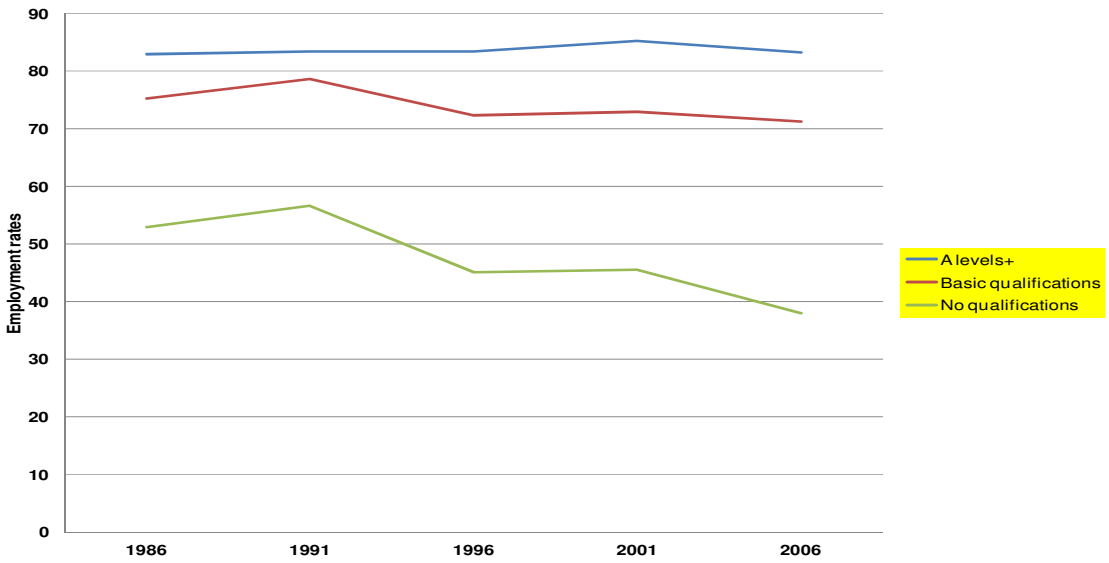
It could be argued that the employment rate remains purely a supply-side measure, reflecting young adults' possession of 'hard' assets (qualifications and experience) and 'softer' characteristics (attitudes and motivation). This is clearly relevant to young adults. Chapter 6 has already shown the distinct set of individual disadvantages that young adults on Incapacity Benefits face. In addition, frontline advisors often cite supply-side barriers to helping disadvantaged young adults prosper in the labour market. For instance, the young long-term unemployed might have unrealistic expectations in terms of what to expect in terms of wages; they may be unwilling to travel even short distances, through mentality or routine, expecting to walk into a job a few streets away; or in some cases have a bad attitude and low motivation, making any job they do get short-lived (Sunley et al: 107-117). Again, Chapter 6 suggests that attitudes towards work and learning may be rather more negative among young adult IB claimants. The question is whether demand can be discounted.

While it is difficult to test the impact of all these factors, it is possible to examine employment prospects over time for young adults NFTE with similar characteristics. The first of these is skill levels, measured indirectly by the highest level of qualifications possessed: high (A-level or above), basic qualifications (below A-level) and none. Although this distinction is a very crude one, it is highly relevant to the issue since almost half of young adults claiming Incapacity Benefits have no qualifications and almost 90% have qualifications below A-level (see Chapter 6). Although the proportion of young adults with

low or basic skills in Britain fell between 1986 and 2006, more than half (54%) had qualifications below A-level in 2006.

The results of this analysis are stark (*Figure 7.2*). Employment rates for the most qualified group were consistently above 80% between 1986 and 2006. By contrast, employment rates for young adults with basic qualifications increased to a high of 79% in 1991 but had fallen to 71% by 1996, where they subsequently remained unchanged. For young adults NFTE without qualifications in Britain the labour market deteriorated sharply, with employment rates falling from 53% in 1991 to 38% in 2006. The collapsed labour market remained a reality for the least skilled young adults not in full-time education.

Figure 7.2: Employment rates for young adults aged 16-24 not in full-time education (NFTE), by highest level of formal qualification: Great Britain, 1981-2006

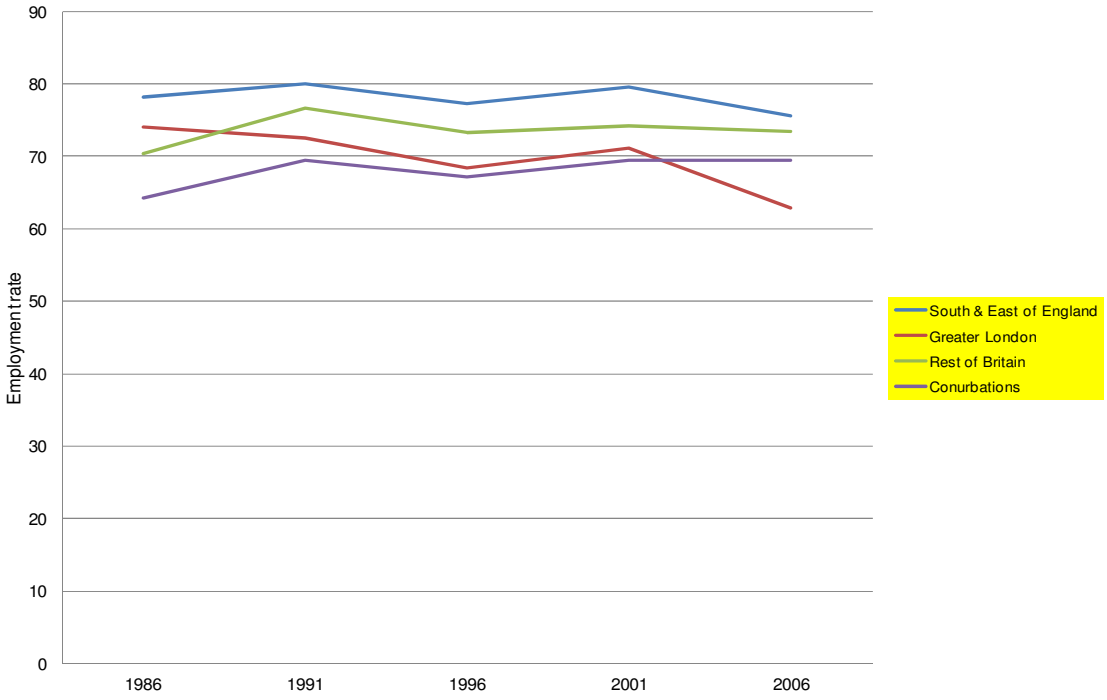


Source: Labour Force Survey, 1986-2006

Alongside these national changes, the local dimension is also important. Data limitations with the Labour Force Survey do not permit trends in the economic clusters and counties to be constructed in full. Greater London, the English Metropolitan Counties and Strathclyde/Clydeside are the only sub-regional geographies that can be identified in the

Labour Force Survey before the mid-1990s. To overcome this problem, four 'proxy' clusters were created: the Conurbations, Greater London, the South and East of England (SEEE) and the Rest of Britain. In general terms, counties from Prospering Britain dominate in the SEEE geography while the Rest of Britain is dominated by a mixture of Coalfield & Industrial Legacy and Rural & Coastal Britain counties.

Figure 7.3: Employment rates for young adults aged 16-24 not in full-time education (NFTE), by selected area of residence: Great Britain, 1986-2006



Source: Labour Force Survey, 1986-2006

Results of this analysis are shown above in Figure 7.3. In 1986 (the post-war claimant count peak), employment rates for young adults NFTE in the SEEE were close to 80%, but lower in other parts of Britain and just 64% in the Conurbations. If the collapsed labour market theory is no longer relevant, this gap should have closed over time as older industrial areas adapted. Actual trends show limited progress. In the Rest of Britain and Conurbations, differences in labour market opportunities compared with the SEEE narrowed but did not disappear. Even

in 2006, young adult NFTE employment rates in the Conurbations were still 6% lower than those in the SEEE. At a local level, progress remained weaker in Merseyside and South Yorkshire, with consistently better performance of the youth labour market in the West Midlands, where employment rates tracked those of the SEEE. In Greater London, labour market opportunities for young adults NFTE deteriorated over time, falling from 74% to 63%. An obvious question is why Greater London's labour market problems did not translate to the same extent in growth in young adult SREI as other urban areas, a theme discussed in more detail in Chapter 8. However, it is useful to note that Greater London *open* youth unemployment rate has remained well above the English average since the early 1990s (Trust for London & NPI, 2010-11). This suggests that the Capital's collapsed youth labour market manifested in a different way.

Completing the analysis, employment rate trends for these geographies can be disaggregated by highest level of qualification. For young adults not in FTE with A-levels, employment rates in the South and East of England fluctuated around 85% to 90% over this twenty year period (*Figure 7.4*). In the same period, their counterparts in the Conurbations and the Rest of Britain saw their employment rates improve and close the gap by 2006. Highly qualified young adults NFTE in Greater London saw employment rates consistently above 80% until 2001, though their position subsequently deteriorated. For the most-qualified young adults outside of Greater London the adaption theory of the labour market holds true.

A more mixed position is seen for young adults not in FTE with basic qualifications (*Figure 7.5*). For this group, employment rates in the Conurbations and Rest of Britain increased to a peak in 1991, before falling back to fluctuate without much change in 1990s. However, employment rates for this group fell in South & East of England and in Greater London. As a result, the gap in employment rates between the Conurbations/Rest of Britain and the SEEE narrowed but did not disappear. Employment rates for young adults NFTE with basic qualifications were still 5% lower in the Conurbations than in SEEE in 2006. Acquiring basic qualifications helps to narrow geographical disparities in the young adult labour market but does not overcome them.

Figure 7.4: Employment rates for young adults NFTE with high (A-levels+) qualifications by area of residence: 1986-2006

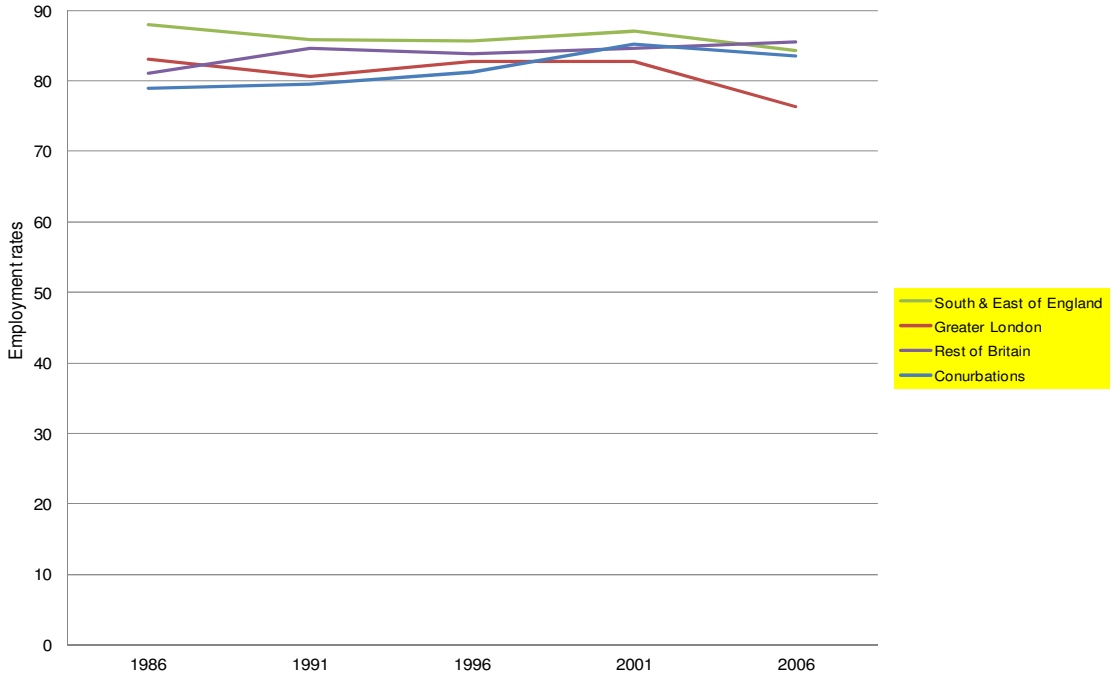
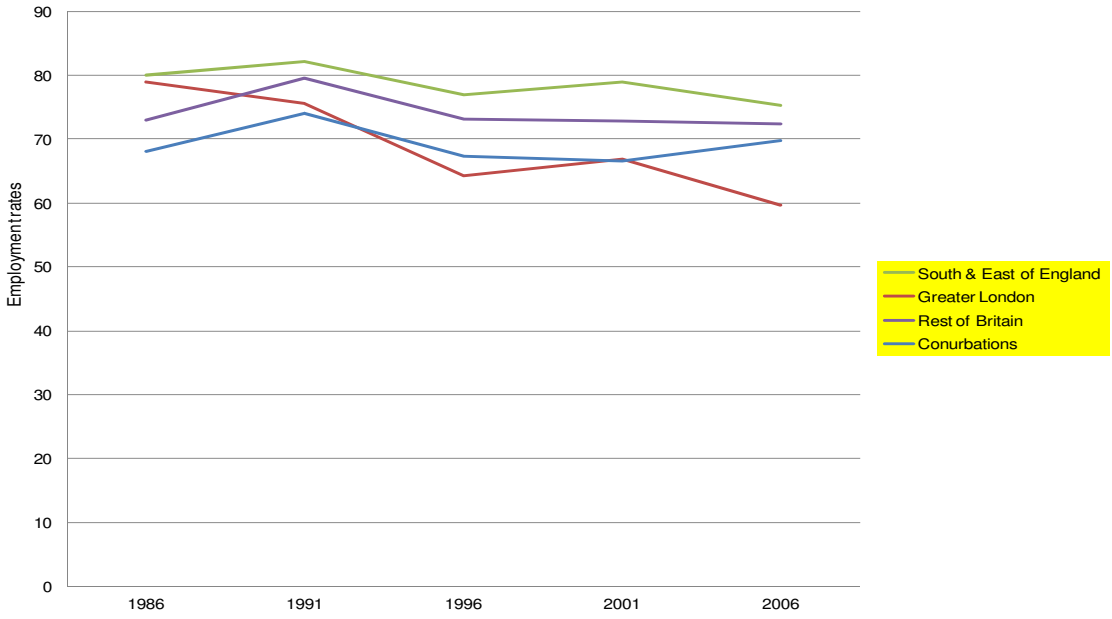
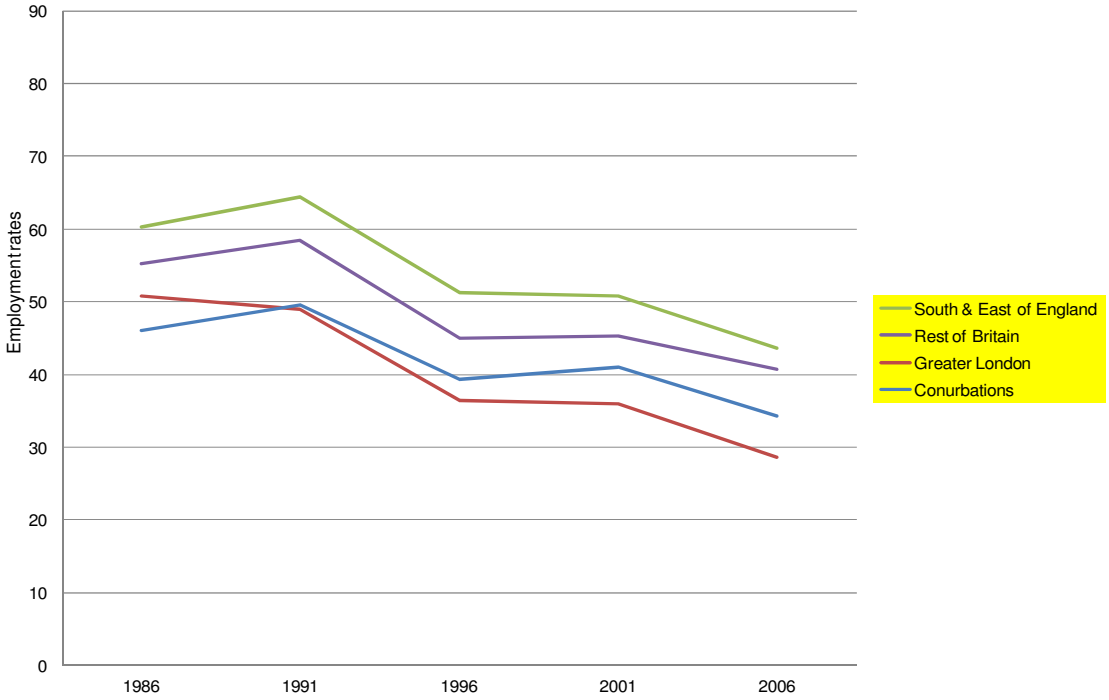


Figure 7.5: Employment rates for young adults NFTE with basic (below A-level) qualifications by area of residence: 1986-2006



Source: Labour Force Survey, 1986-2006

Figure 7.6: Employment rates for young adults NFTE with no qualifications by area of residence: 1986-2006



Source: Labour Force Survey, 1986-2006

The final chart (*Figure 7.6*) shows what happened to the labour market for unqualified young adults. Employment rates (already very low in 1986) fell steadily from 1991 everywhere - and there was much less narrowing of the employment gap between the South & East of England and the other geographies. Changes in the youth labour market saw an improving situation for those with qualifications in the Conurbations and the rest of Britain relative to SEEE, but deterioration in the employment opportunities for young adults NFTE in Greater London and less skilled young adults everywhere, though the very lowest employment rates for this group were seen in Greater London and the Conurbations.

7.2.3 Implications for young adult SREI

Returning to the two views introduced at the beginning of this section, elements of both the collapsed labour market and the adaption thesis were at work in the young adult labour market between 1986 and 2006. However, their relevance to particular young adults varied

by social background, skills and geography. For those fortunate enough to have the personal and familial resources required to remain in education, growth of student numbers reflects both a positive response, and investment in human capital, by young adults and society. It also represented a pragmatic solution to the more limited transition paths available for those in early adulthood. Although some young adults may continue in education because of a perceived lack of opportunities, for most (especially the most privileged in Higher Education) actual risk of failure remains low (Furlong and Cartmel, 2007: 51).

For young adults not in FTE, labour market opportunity continued to be influenced by place of residence and educational attainment. By 2006, geography made little difference to the employment prospects of better qualified young adults: outside of Greater London, their employment rates exceeded 80%. Modest progress was made for young adults with basic qualifications, though the employment gap between stronger and weaker labour markets did not disappear. For unqualified young adults not in full-time education, the picture is rather bleaker: their employment rates declined steadily everywhere in Britain, especially in Greater London and sign of geographical convergence remained much more limited.

Low skills and employer practices blend with weak local labour demand to make labour market entry much more challenging for this group, while lack of qualifications also limits the scope for post-secondary education. In the Conurbations and Greater London, the imbalance between supply and demand for elementary occupations (see Chapter 4) is likely to play a role, as is the greater access to student labour in urban centres discussed elsewhere (Munro et al, 2009). Since growth of young adult SREI was seen particularly in the Conurbations, and this group is more likely to be poorly-skilled, labour market demand remains a candidate to partly explain the growth of the Incapacity Benefits caseload among young adults.

7.3 The Benefits System and young adults

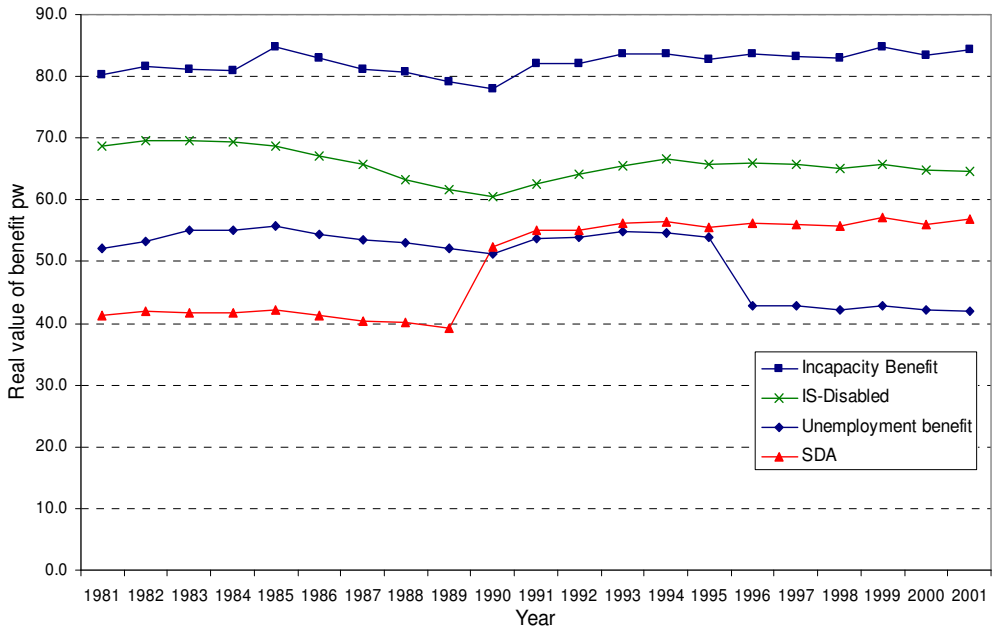
The second proposition is that the growth in Incapacity Benefits among young adults can be attributed to a malfunctioning welfare system. One conclusion drawn by policy-makers is that ongoing inactivity and unemployment among this age group is (at least in part) a choice, reflecting young adults' taste for work, though they are willing to concede that choice is much more constrained among young adults with few qualifications and limited work experience (Conservative Party, 2008; Centre for Social Justice, 2008). Some argue that the generosity of IB, either in absolute terms, or relative either to wages or unemployment benefits created perverse incentives to move onto these benefits (Cackett and Green, 2005; Bell and Smith, 2004). Others attach more weight to the lack of conditionality attached to IB, complexity of the system and reduced scrutiny of new claimants (Freud, 2007; Kay and Hardwich, 2008). These views strongly influence Government and Opposition thinking on welfare reform. Both argue that the welfare system must be recast into one based on 'rights and responsibilities', where claimants are increasing asked to be actively looking for or preparing to look for employment, in exchange for a more individualised package of support. To understand these issues more fully in relation to young adults, the operation of the benefits system at a national and local level, as well as its generosity, needs closer scrutiny.

7.3.1 Absolute generosity

First, can changes in the *absolute* generosity of Incapacity Benefits explain the rising number of young adults claiming incapacity benefits? Figure 7.7 presents the real value of four key benefits (in constant 2001 prices) to young adults between 1981 and 2001. Incapacity benefits examined were: IB for beneficiaries; Income Support with Disability Premium; and Severe Disability Allowance. Unemployment benefits (renamed Job Seeker's Allowance (JSA) in 1996, with new conditions attached) was also examined. All benefits were adjusted to reflect the ages of claimants, and changes to the benefits system through time. For simplicity, claimants were assumed to be single and housing benefits and costs excluded from consideration.

Incapacity Benefit was worth most throughout the period, but most young adults are unlikely to have made the necessary N.I. contributions to receive this particular benefit. Instead, the focus should be on *Income Support-Disability Premium (IS-DP)* and *Severe Disability Allowance (SDA)*. *IS-DP* fluctuated in value over time, but despite increasing in value between 1990 and 1994 (from £60 to £66) its value remained unchanged for the rest of the decade. Severe Disability Allowance (SDA) also saw its real value increase, driven by the introduction of the age-related addition in 1990. This change also made SDA worth slightly more than unemployment benefit from 1990, whereas in real terms it was worth £10-13 less than UB in the previous decade.

Figure 7.7: Real value of selected welfare benefits to young adults (aged <25) in Britain, 1981-2001



Source: Social Security Statistics; DWP. Benefits adjusted using ONS real purchasing power deflator, 2001=100.

As only SDA increased by any significant proportion (though the amount paid per week to claimants, £56 remained small) over the period, this would seem an obvious candidate for more scrutiny. There were proportionately large jumps in the number of SDA claimants aged 16-24 in 1983/84 and 1984/85, following NCIP's replacement, but this pre-dates the steep rise in its value in 1989/90. It is true there were also increases in the SDA caseload aged 16-

24 in 1990 and 1993 - but more than three quarters of the increase in the caseload in the age group took place before 1989.

Thus there is some evidence that the small increase in generosity in the real value of NCIP/SDA between 1981-01 was associated with growth in the caseload of young adults claiming this particular benefit. There is no evidence that the other main non-work benefits paid to young adults became more generous in their own right.

7.3.2 The 'Replacement ratio' and the Incapacity Premium

The danger in considering the benefits system in isolation is that it neglects the crucial relationship between wages and out-of-work benefits. For those at the bottom of the labour market (especially the young and the low-skilled), even meagre benefits may facilitate a better standard of living compared with wages, once taxes etc. are taken into account. In theory, if the 'replacement ratio' (the proportion of average take-home pay 'replaced' by benefits) is high the incentive to claim or remain on benefits is also high. While the replacement ratio has some flaws as a means of measuring generosity, it remains widely used by researchers and international agencies in their analysis of welfare regimes (Eardley et al, 1996).

Figure 7.8 shows that the replacement ratio faced by young adults for both unemployment benefits (0.19) and IS-DP (0.30) was low in 2001 and that far from increasing over time, the replacement ratio of both benefits actually fell. Between 1981 and 1991, the replacement ratio of unemployment benefits fell from 0.30 to 0.26, with a further fall to 0.19 by 2001. For IS-DP, the replacement ratio fell from 0.40 to 0.31 between 1981 and 1991, with a much less pronounced reduction to 2001. Growing generosity relative to wages itself does not seem a credible factor at a national level. Although the ratio is likely to be higher in local labour markets with weaker demand (because of lower wages), this is unlikely to change the trend.

If perverse incentives were at work, they appear more related to the value of incapacity benefits relative to unemployment benefits: an 'incapacity premium'. This can be calculated

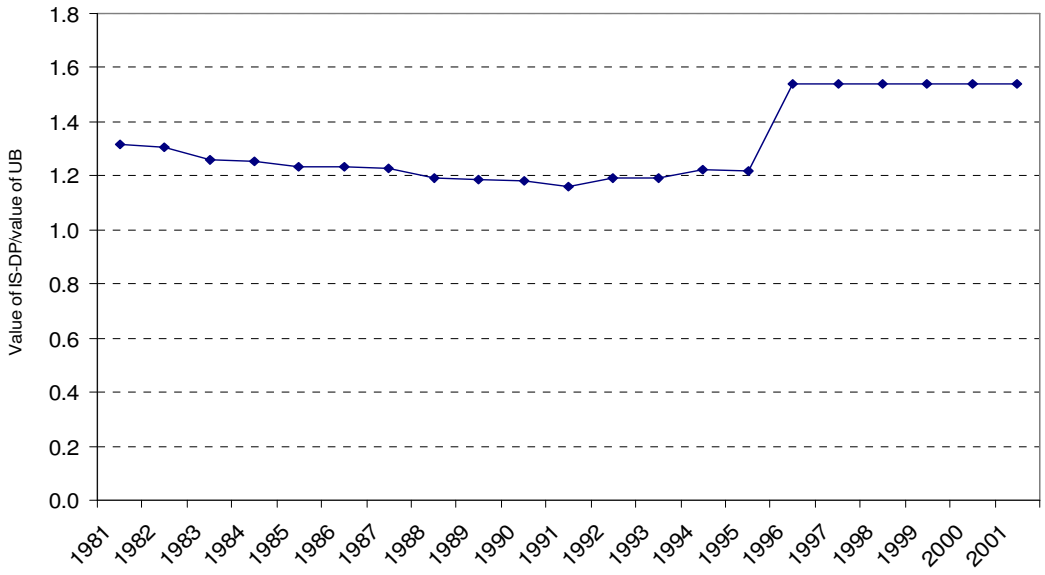
by dividing the real value of Incapacity Benefits for young adults (again, represented by IS-DP) by the real value of unemployment benefits over time. It gives some idea of the relative financial advantage associated with Incapacity Benefits. No attempt has been made to adjust for the higher living costs that people with health problems may face.

Figure 7.8: 'Replacement ratio' for male aged 21-24, FT worker in manual employment, selected benefits: 1981, 1991 and 2001

Sources: Benefits Data as Figure 7.7. Gross earnings for male manual FT workers aged 21-24 from the New Earnings Survey, net of average tax and national insurance contributions for a single man on average earnings in 1981/82, 1991/92 and 2001/02.

Between 1981 and 1995, unemployment benefit for young adults fluctuated in value around the £50 per week mark, but the most notable change came with the introduction of Job Seeker's Allowance (JSA) in 1996, which reduced its value to £42 per week. Adjusting for internal purchasing power, the value of unemployment benefit for young adults subsequently remained flat and stable between 1996 and 2001. Figure 7.9 tracks the value of Income Support-Disability Premium for young adults between 1981 and 2001.

Figure 7.9: Ratio of IS-DP to Unemployment Benefits/Job Seeker's Allowance, 1981-2001



Source: Social Security Statistics; DWP.

For young adults, trends in the incapacity premium can be divided into four periods. Between 1981 and 1991, it was slowly declining in value, as the ratio of IS-DP fell from 132% to 118% of unemployment benefit paid to young adults. Then from 1991-95, there was a partial increase, as the incapacity premium increased slightly to 1.22. Figure 7.8 then records the sizeable 'jump' in the incapacity premium in the mid-1990s following the introduction of the Job Seeker's Allowance (JSA), to 1.54. From then until 2001, its value remained stable, albeit at that much higher level. Throughout the period, such benefits were worth more in cash terms than unemployment benefits.

7.3.3 Administrative changes and local effects

There is some credibility to the view that the welfare system was relatively more generous in its treatment of young adults with health problems than those who were 'simply' unemployed, and that this premium grew more generous in the 1990s. However, it is also arguable that young British adults were particularly exposed to welfare state retrenchment

during the last decades of the 20th century (Daguerre and Taylor-Gooby, 2002). Benefit rules changes impacted both at the household (e.g. loss of contribution to 'board' for 21-24 year olds) and individual (withdrawal of benefits from students and 16-17 year olds from 1988) level (Bell and Jones, 2002; Evans et al, 1994). In this reading, movement *between* out of work benefits, or 'cycling' becomes less about generosity and more about the unintended consequences of ever more stringent conditions attached to unemployment benefits in difficult labour market conditions.

Such effects occurred after the introduction of Job Seeker's Allowance (JSA) in 1996 and young adults were not immune from these effects (Manning, 2009; Petrongolo, 2007). Cycling has also been observed following the introduction of other increased conditionality regimes, including New Deal for Young People (McVicar and Podvinsky, 2003). Between 1981 and 2001 the ratio of young adults claiming unemployment benefits to those describing themselves as unemployed fell from 0.88 to 0.61 (*Table 7.3*). This hints at the shifting of the young adult unemployed onto inactive benefits, or 'cycling'.

Table 7.3: Comparing unemployment measures, young adults in Britain: 1981, 1991 and 2001

	1981	1991	2001
Unemployment benefit claimants	754,034	613,710	223,530
Unemployed (Census)	849,897	972,991	367,941
Ratio	0.88	0.63	0.61

Source: 1981-2001 Censuses of Population; Social Security Statistics; DWP

To reduce the risk of 'cycling', the Government and Opposition propose phasing out Income Support and Incapacity Benefits and replacing it with a single working-age benefit. While this approach may reduce some perverse incentives at a national level, it does not address substantial variation in outcomes seen for those leaving benefits in different parts of the country. Figure 7.10 shows differences in the percentage of young long-term (6 months+) JSA leavers moving onto IB by economic cluster in the period 1998-2008. In the Conurbations and Coalfields & Industrial Legacy areas, more than 5.5% of young long-term JSA leavers were diverted to IB, compared to less than 4.0% in Prospering Britain and 2.0% in Greater London. Particularly high rates of cycling are seen in counties in the North East of England, Strathclyde and the South Wales Coalfields. Likelihood of being cycled from

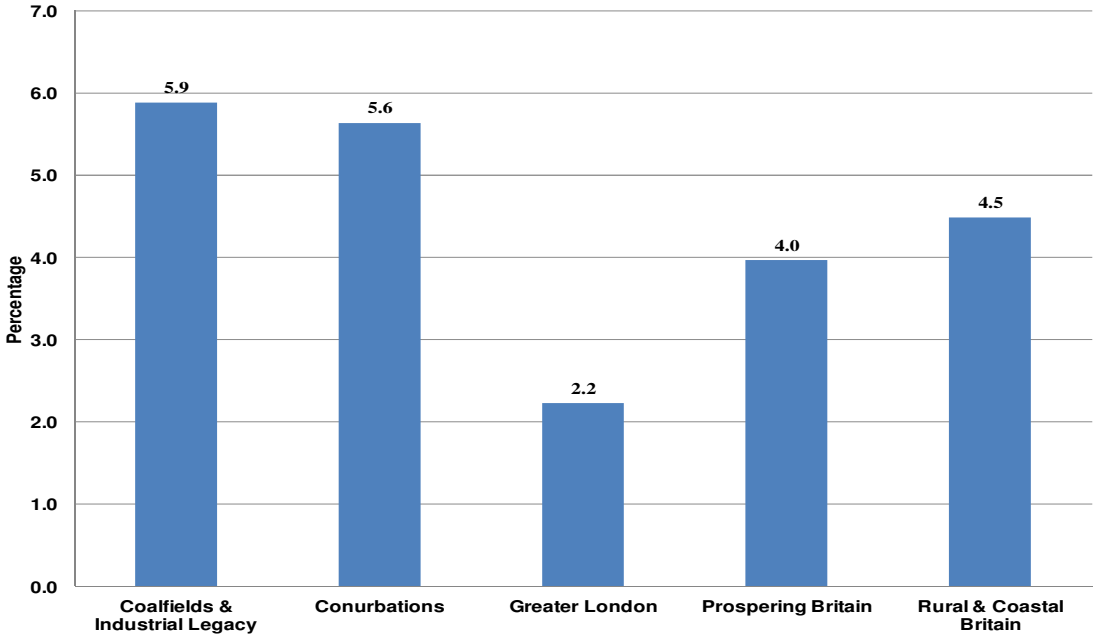
Incapacity Benefits onto other out-of work benefits also differs by cluster for young adults (*Figure 7.11*).

Although the association is weaker compared to JSA leavers, young adults leaving IB in the Conurbations in 2004 were almost twice as likely to move onto other benefits compared to those in Rural & Coastal Britain (32% against 17%). Finer grain analysis suggests these are driven by higher rates of cycling in Strathclyde and (less reliably) the West Midlands.[26] Such spatial differences are likely to reflect a mixture of factors: higher local replacement ratios, weaker labour market demand, lower labour force skills and poorer population health. The last three of these factors, specific to young adults, are discussed later in this chapter, while Chapter 4 has already suggested an association between local wages and benefits caseloads.

Although this analysis presented in this section rests on some highly stylised facts, it does hint at the role the welfare regime played in the growth of young adults claiming IB. Push effects are likely to have included the unintended consequences of increased conditionality for unemployment benefits, especially where national rules met local social and economic conditions. Pull effects stem largely from the consistently higher value of Income Support-Disability Premium relative to unemployment benefits, and to a lesser extent absolute increases in the value of SDA. The situation will be complicated by the 'passport' role that IB play in granting access to other benefits (such as housing benefit), but this does not undermine the essential arguments being advanced. In contrast, there is no evidence that Incapacity Benefits grew more generous relative to wages over time.

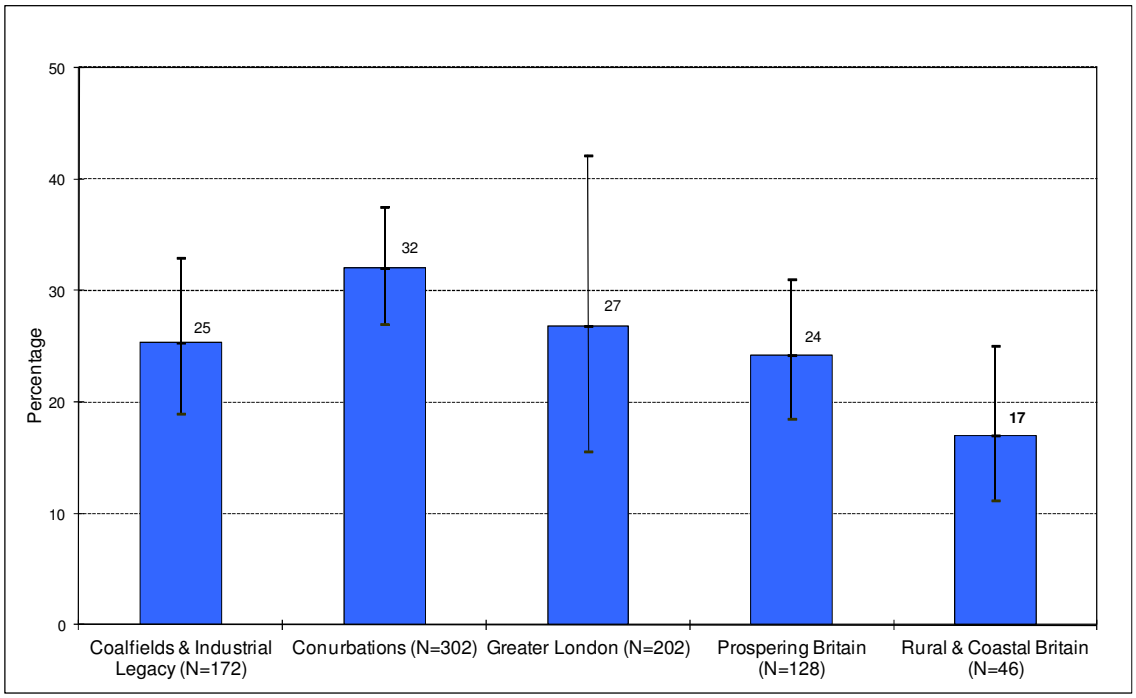
[26] Since 2002, the DWP has published data on the proportion of those finishing a claim for IBSDA but still claiming another benefit. The methodology used is different from that used in the Benefit Leavers Survey (based on administrative data) so the figures are not comparable.

Figure 7.10: Percentage of young adult (aged 16-24) long-term (6 months+) JSA claimants finishing claim and moving onto Incapacity Benefits, by economic cluster



Source: DWP Claimant Count Destinations of Leavers, Feb 98-Feb 08 inclusive.

Figure 7.11: Percentage of young adults claimants (aged 16-24) finishing claim for Incapacity Benefits and moving onto 'Other Benefits', by economic cluster



Source: 2004 Benefit Leavers Survey (unpublished data).

7.4 Family

7.4.1 Introduction

As discussed in Chapter 2, family effects, such as parental employment, family fragmentation and social class, are likely to have an impact on labour market outcomes. The source used to examine these issues is the British Cohort Study (BCS) 1970. Also known as the BCS70, this began life as a study of ante- and post-natal service provision, perinatal mortality and morbidity, drawing on a cohort of more than 17,000 babies born in Britain in one week in 1970. Over time the BCS70 was gradually expanded into a longitudinal study of the lives of young adults across Britain, with five follow-up sweeps conducted by 1999/00, including one in 1986 and another at the turn of the century. Since the BCS70 is a longitudinal study, it is possible to look at the association between cohort member's past life events and current status. The sections that follow will briefly examine associations between parental employment, family fragmentation and social class on young adults claiming Incapacity Benefits, controlling for place and labour market demand.

7.4.2 Parental employment

Father's employment status in 1986 was significantly associated with whether a cohort member was claiming IB in 1999/00 (*Table 7.4*). Almost one in twenty (4.7%) of cohort members whose father were not working in 1986 were claiming IB in 1999/00, compared to less than 1 in 50 (1.5%) of those whose father was in employment. This association was significant regardless of grouped 1986 cluster of residence or of 1986 county unemployment rates, though the very highest IB claimant rates are seen for those with a non-working father at aged 16 who were living in high unemployment areas or in older industrial counties.

This analysis was repeated for mother's employment status (*Table 7.5*). Mother's employment status in 1986, this was also significantly associated with whether a cohort member was claiming IB in 1999/00 for Great Britain as a whole (3.4% against 1.5%). Associations were significant regardless of grouped 1986 cluster of residence or of 1986 county unemployment rates. The highest IB claimant rates were observed for young adults

combining maternal non-employment with residence in a high unemployment area or Older Industrial Britain.

Table 7.4: Whether claiming Incapacity Benefits or not in 1999/00, by whether father in work in 1986: by combined economic cluster and 1986 county unemployment

	Father not in work (1986)	Father in work (1986)	P-value	N
ALL IN SAMPLE	4.7	1.5	0.00	6,899
Coalfields & Industrial Legacy or Conurbations	5.8	1.9	0.00	2922
Greater London, Prospering Britain or Rural & Coastal Britain	3.4	1.3	0.00	3,977
Low-medium unemployment 86	3.1	1.4	0.00	4,735
High unemployment 86	6.9	1.9	0.00	2,164

Source: British Cohort Study 1970, linked 1986 and 1999/00 datasets. Original analysis for thesis.

Table 7.5: Whether claiming Incapacity Benefits or not in 1999/00, by whether mother in work in 1986: by combined economic cluster and 1986 county unemployment

	Mother not in work (1986)	Mother in work (1986)	P-value	N
ALL IN SAMPLE	3.4	1.5	0.00	6,835
Coalfields & Industrial Legacy or Conurbations	3.8	2.0	0.01	2,914
Greater London, Prospering Britain or Rural & Coastal Britain	3.0	1.1	0.00	3,914
Low-medium unemployment 86	3.0	1.1	0.00	4,669
High unemployment 86	4.0	2.4	0.03	2,166

Source: British Cohort Study 1970, linked 1986 and 1999/00 datasets. Original analysis for thesis.

7.4.3 Family fragmentation

The second family aspect to consider is that of family fragmentation. Here the measure is derived from the relationship of the (then) current father figure to the cohort member in 1986. This was used to create a new dichotomous variable: whether or not the current father figure was the cohort member's natural father (this time the difference is shown in the right hand column). Once more the aim was to control for place, labour market demand and social class

(*Figure 7.6*). If the cohort member was not living with their natural father at age 16, this was significantly associated with a greater likelihood of claiming IB at age 29 (3.4% against 1.9%). However, this particular family effect was significant only for those living outside of older industrial counties or in low unemployment areas in 1986.

Table 7.6: Whether claiming Incapacity Benefits or not in 1999/00, by whether father figure natural father in 1986: by economic cluster and 1986 county unemployment

	Not natural father or no father figure	Natural father	P-value	N
ALL IN SAMPLE	3.4	1.9	0.00	9,351
Coalfields & Industrial Legacy or Conurbations	3.2	2.5	N.S.	4,281
Greater London, Prospering Britain or Rural & Coastal Britain	3.6	1.4	0.00	5,070
Low-medium unemployment 86	2.9	1.5	0.00	6,156
High unemployment 86	4.2	2.7	N.S	3,195

Source: British Cohort Study 1970, linked 1986 and 1999/00 datasets. Original analysis for thesis.

7.4.4 Social class

Social class effects are also likely to be closely related to deindustrialisation since it was disproportionately those from skilled manual, semi-skilled or unskilled background who were directly affected by job destruction in traditional industries. Analysis by social class in the BCS70 is constrained by smaller sample sizes than for the other variables. However, the broad pattern can be described (*Table 7.7*). For the sample as a whole, young adults from a working class background had a significantly increased likelihood of claiming IB at age 29 compared with their middle-class peers (2.1% against 1.0%). The 'protective' effects of coming from a middle class background also seem to operate only outside of the Coalfields & Industrial Legacy or Conurbations counties and in counties where unemployment was low to medium in 1986.

Table 7.7: Whether claiming Incapacity Benefits or not in 1999/00, by social class: by combined economic cluster and 1986 county unemployment

	Working class (IIIm – V)	Middle class (I – IIIn)	P-value	N
ALL IN SAMPLE	2.1	1.0	0.00	6,366
Coalfields & Industrial Legacy or Conurbations	2.1	1.3	N.S.	2,646
Greater London, Prospering Britain or Rural & Coastal Britain	2.1	0.8	0.00	3,720
Low-medium unemployment 86	2.0	0.9	0.00	4,404
High unemployment 86	2.2	1.2	N.S	1,962

Source: British Cohort Study 1970, linked 1986 and 1999/00 datasets. Original analysis for thesis.

7.4.5 Family and place: what impact on SREI?

From the analysis above, family effects such as parental employment, family fragmentation and social class played an important role in shaping risk of claiming IB among young adults – but these interacted with geography, labour market demand and social class to produce different outcomes. All things being equal, a young adult with one or both parents in employment, living with their natural father at age 16 or from a middle class background had a reduced risk of claiming IB at age 29. Social background and family fragmentation, however, seem to matter more for those who lived in stronger labour markets or outside of older industrial Britain. Place effects and the trajectory of the local labour market may in some cases have added to family disadvantage or overwhelmed family protective factors.

7.5 Bringing the Model Together

7.5.1 Logistic regression analysis

So far this chapter has discussed the potential structural and family influences on young adult IB claiming as discreet issues. In order to define the factors that predict the risk of a young adult claiming Incapacity Benefit more precisely, binary logistic regression was applied to a large scale cohort study, the British Cohort Study (BCS) 1970. Binary logistic regression is used where the dependent or response variable is dichotomous (here this is whether or not the young adult was claiming Incapacity Benefits at age 29) and the independent explanatory variables are either categorical or continuous; see discussion in 3.4.4 above. As a longitudinal study, the British Cohort Study provides the opportunity to explore whether past events, such as the employment status of a cohort member's father when the cohort member was an adolescent, has an impact on current labour market outcomes. The clear time sequence between exposure to an event and an outcome also makes this cohort study more powerful than cross-sectional studies about inferring cause and effect. However, the BCS70 also has a number of important limitations. It is unweighted and like all cohort studies, there is a degree of drop-out between research rounds. If the cohort study has become progressively unrepresentative of the population, or the remaining cohort members are simply different to the population as a whole in some other way, then drawing conclusions about cause and effect becomes more difficult.

Three rounds of BCS70 data were linked to select appropriate variables for this analysis: the 1986, 1996 and 1999/00 data-sets. Of the three, the 1996 follow-up proved less useful, mainly because lower response rates at this sweep (it was a postal survey) reduced the potential for record linkage. Nevertheless, it did contain an indicator on whether cohort members had ever been unemployed. This was retained as a marker of exposure to the welfare system since leaving school. The 1999/00 and 1986 were both extensive with a range of useful indicators, the former providing current benefit claimant status, attitudes, soft skills and highest level of qualifications and the latter information on family background and the district health authority (DHA) where the cohort member was living in 1986. This last piece of information was used to create a derived variable on whether the young adult was living in older industrial Britain (Conurbations, Coalfields & Industrial Legacy areas) or elsewhere.

Claimant count rates for the working-age population of each county in 1986 were also calculated to determine whether cohort members were living in an area of high, medium or low unemployment in 1986. With all variables included in the model (i.e. with missing cases excluded), the dataset offered 1,999 observations, of which 39 were claiming Incapacity Benefits.

In line with the literature and evidence assembled earlier in this and the preceding Chapter, predictor variables were selected to capture structural (labour market, welfare regime) and intermediary (family structure, parental employment, social class) factors as well as individual characteristics (such as employability and mental health)[27]. Before presenting the results, it is worth noting several limitations. First, many of the individual characteristics are either based on subjective opinions or rely on the testimony of cohort members. Second, structural and family factors are not fixed and may reflect a degree of choice. Depending on the degree of social mobility in society, children may not necessarily end up in the social class as their parents; while geographical mobility leaves open the possibility that some families might have moved between 1986 and 1999/00.

[27] Appendix 7 shows the choice of predictor variable and how they were defined.

7.5.2 Results: a Basic Model

Logistic regressions of Incapacity Benefit claimant status on structural, family and individual suggest that all three 'levels' of variable were associated with this outcome, though not in a straightforward fashion. In this first round of analysis, none of the structural variables was significant at $P<0.05$. Examining the family variables, cohort members' mother being in employment, when the respondent was 16, was associated with significantly reduced odds of claiming IB at age 29, though the impact was modest. Paternal employment status when they were 16, family fragmentation and father's social class did not prove to be significant. Among the individual characteristics, possession of formal qualifications reduces the odds ratio for claiming IB at age 29: this is expected, given the positive relationship between education and both employment prospects and mental health. Since the individual labour market characteristics are measured in 1999/2000, it is not possible to say for certain the direction of causation: but it might be reasonable to suppose that lack of academic success preceded benefit status. One soft employability characteristic (rating teamwork skills as good or fair) was also associated with lower likelihood of claiming IB at age 29. Neither of the remaining soft skills nor the attitudes to work and learning in this first model was significantly associated with claiming IB at age 29.

Finally, examining the health variables reveals an intriguing picture. Past use of problematic drugs was insignificant as a variable (once other factors are accounted for). Some caution might be attached to this aggregate picture, since problematic drug use in particular is spatially and socially concentrated. Further tests also showed that previous experience of unemployment and problematic drug use were significantly associated with high GHQ-12 scores and common mental health problems, in line with the literature. Nonetheless, the only significant association that remains in this group is common mental health problems (as measured by a GHQ-12 score of 4+) at age 29, which significantly increases the odds ratio for claiming IB at the same point in time.

The next step was to refine the model. Using the Stepwise method, insignificant variables ($p>0.05$) were dropped from the model, the least significant at each step. This changed the

composition of the model somewhat (*Table 7.8*). This refined model contained the four variables which were significant in the original model, but also a structural indicator (ever unemployed at age 26). With fewer variables, this model is based on 4,141 observations including 88 young adult IB claimants. As expected, ever being unemployed was associated with a higher proportionate change in odds ratio of claiming Incapacity Benefits. Examining the Wald statistics, which give a crude indicator of the relative strength of each element of the model, suggests that common mental health problems, mother's employment status in 1986 and whether or not the cohort member had formal qualifications, in that order were contributing most to the risk of claiming IB. Teamwork skills and exposure to the welfare regime played a more subsidiary role.

As a check on the validity of the model, an OLS regression model was run using the same dependent and independent variables as the preferred logistic regression model. This approach was proposed by Menard (2002) who argued that *"the functional form of the model for the dependent variable is irrelevant to the estimation of collinearity"*(Menard, 2002: 76), meaning that the diagnostic statistics of an OLS model can provide guidance as to the degree of multicollinearity in a logistic regression model. The variance inflation statistics were low (close to 1) but an eigenvalue was close to zero and a condition index reached 28, indicating a potential problem with multicollinearity, which was likely to inflate the standard errors of coefficients. However, dropping the least significant variable (ever unemployed) produced a less satisfactory model (much higher 2 log likelihood) and perhaps more importantly lost information important to the theory, so it was decided to retain all significant variables in the model.

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Table 7.8: Reduced model of explanatory factors in the growth of the young adult IB caseload in Britain

		Regression coefficient (B)	Standard error	Wald Statistic	Significance	EXP(B)	95% CI	
Category=0	***Category=1***						Lower	Upper
Ever unemployed (No)	Yes	.533	.239	4.986	0.03	1.703	1.067	2.718
Mother in work when cohort member was 16 (Not working)	Working	-.956	.220	18.929	0.00	.384	.250	.591
Any qualifications at age 29 (No)	Yes	-.914	.243	14.184	0.00	.401	.249	.645
Self rating of teamwork skills (Poor/don't have this skill)	Good/fair	-1.344	.485	7.662	0.01	.261	.101	.676
GHQ-12 score at age 29 (<4)	4+	1.032	.228	20.575	0.00	2.807	1.797	4.385

Number of cases= 4,141; Nagelkerke's $R^2 = 0.094$; -2LL= 778.569; LL Chi-squared=73.386

7.5.3 What about place and labour market demand?

Evidence developed so far in this chapter and thesis support the theory that place effects, either broadly defined or more specifically through labour market demand, play an important role in shaping SREI in Britain. It seems unlikely that these effects should be entirely absent from a refined model. To test this, the two binary variables (cluster and claimant unemployment 86) were added in sequence to the refined model. Cluster of residence was found to be significantly associated with likelihood of claiming IB at age 29, with residence of Greater London, Prospering Britain or Rural and Coastal Britain lowering risk of claiming SREI. As shown in Table 7.9, someone living in these clusters at age 16 had a risk of 0.64 of claiming IB at age 29 compared to a cohort member living in the Coalfields or Conurbations in 1986 (*Table 7.9*). The strength of association as measured by the Wald statistic was of a similar magnitude to experience of unemployment by age 26. Similarly, living in a county with a high rate of claimant unemployment in 1986 was also found to be associated with increased likelihood of claiming IB at age 29, with the risk relatively lower than for the 'cluster' measure. Someone living in a county with a high level of unemployment in 1986 had a risk of 1.56 of claiming IB at age 29 compared to their counterparts living in a county with medium or low unemployment (*Table 7.10*). Young adult SREI seems to have been shaped by a mixture of structural, family and individual factors.

Interaction variables were also created based on the interaction between the five variables in 7.8 and (a) a dummy for residence in a high unemployment county in 86 (0=medium-low, 1=high) and (b) a dummy for cluster of residence in 86 (0=Coalfields & Industrial Legacy, 1=Prospering Britain, Rural & Coastal Britain or Greater London). Controlling for other variables, the only significant interaction was between (a) high unemployment and the teamwork variable and (b) cluster of residence and the teamwork variable. All other things being equal, cohort members with good/fair team-work skills living in Prospering Britain, Rural and Coastal Britain and Greater London in 1986 had a *lower* risk of moving onto IB than those with good/fair team-work skills living in the Coalfields/Conurbations in 1986. Conversely, cohort members with good/fair team-work skills living in high unemployment counties in 1986 had a *higher* risk of moving onto IB than those with good/fair team-work skills living in low-medium unemployment counties in 1986.

This could be interpreted as evidence that having good 'soft' skills may not offer the same protection against moving onto IB in older industrial areas or high unemployment areas. Some caution should be attached to this finding given the self-rating of team-work skills and the historic nature of the geographical data. Including these interaction terms did not, however, add greatly to the goodness of fit of the models. Future research (beyond the scope of this thesis) might explore this finding in more depth.

Table 7.9: Reduced model of explanatory factors in the growth of the young adult IB caseload in Britain, inc. simplified cluster measure

		Regression coefficient (B)	Standard error	Wald Statistic	Significance	EXP(B)	95% CI	
Category=0	***Category=1***						Lower	Upper
Cluster (Conurbations or Coalfields & Industrial Legacy areas)	Greater London, Prospering Britain or Rural and Coastal Britain	-.442	.220	4.0	0.04	0.64	0.42	0.99
Ever unemployed (No)	Yes	.506	.239	4.5	0.03	1.65	1.04	2.65
Mother in work when cohort member was 16 (Not working)	Working	-.941	.220	18.3	0.00	0.39	0.25	0.60
Any qualifications at age 29 (No)	Yes	-.912	.243	14.1	0.00	0.40	0.25	0.65
Self rating of teamwork skills (Poor/don't have this skill)	Good/fair	-1.376	.490	7.9	0.01	0.25	0.09	0.66
GHQ-12 score at age 29 (<4)	4+	1.026	.228	20.3	0.000	2.79	1.79	4.36

Number of cases= 4,141; Nagelkerke's $R^2 = 0.10$; -2LL= 774.533; LL Chi-squared=77.423

Table 7.10: Reduced model of explanatory factors in the growth of the young adult IB caseload in Britain, inc. simplified 1986 unemployment measure

		Regression coefficient (B)	Standard error	Wald Statistic	Significance	EXP(B)	95% CI	
Category=0	***Category=1***						Lower	Upper
Claimant unemployment 1986 (Low-Medium)	High	.443	.224	3.9	0.04	1.56	1.01	2.42
Ever unemployed (No)	Yes	.518	.239	4.7	0.03	1.68	1.05	2.68
Mother in work when cohort member was 16 (Not working)	Working	-.937	.220	18.1	0.00	0.39	0.25	0.60
Any qualifications at age 29 (No)	Yes	-.910	.243	14.0	0.00	0.40	0.25	0.65
Self rating of teamwork skills (Poor/don't have this skill)	Good/fair	-1.428	.489	8.5	0.00	0.24	0.09	0.63
GHQ-12 score at age 29 (<4)	4+	1.038	.228	20.7	0.00	2.82	1.81	4.41

Number of cases= 4,141; Nagelkerke's R^2 = 0.099; -2LL=774.745; LL Chi-squared=77.210

7.5.4 Narrowing the focus of the model

A criticism of the approach above is that the division of *all* cohort members into claiming/not claiming IB is too simplistic. For example, if the 'hidden unemployment' thesis is valid, a more appropriate approach might be to distinguish only between the economically active (working or seeking work) and IB claimants. The characteristics, motivations and labour market status of those economically inactive for other reasons, such as students, those looking after home and family and the early retired are likely to be more diverse and their inclusion may produce misleading findings. As a preliminary step to exploring this, a subset of the sample was created by excluding other inactive groups, the majority of whom were looking after home and family. (The number of cases reduced from 4,141 to. 3,679).

The next step was to run a logistic model looking at the likelihood of claiming IB versus not claiming IB, in the same manner as previously. Only three variables (any qualifications at age 29, possession of team-working skills and GHQ-12 score) were significant at $p < 0.05$ in the model. Removing variables in order of non-significance produced the revised model shown in Table 7.11. It is apparent that the same variables shown for the whole sample are also relevant for this sub-sample. Where this model differs is in the relative importance of each variable, with a relatively stronger role for qualifications. Adding the geographic variables revealed that, controlling for the other variables shown in 7.11, living in a county with high unemployment was significant in increasing the risk of claiming IB (P=0.04), but cluster of residence was not (P=0.09).

This approach remains preliminary. Future research might develop more sophisticated, genuinely multi-nominal or nested models, building on the approach here, to explore these issues in more depth. However, this additional analysis does hint that if those inactive for 'other' reasons are excluded from analysis, labour market factors might play a more powerful role alongside mental health in determining SREI, providing some support for the 'hidden unemployment' thesis.

Table 7.11: Reduced model for explanatory factors in young adult IB caseload in Britain: excluding those inactive for 'other' reasons

		Regression coefficient (B)	Standard error	Wald Statistic	Significance	EXP(B)	95% CI	
Category=0	***Category=1***						Lower	Upper
Ever unemployed (No)	Yes	.635	.267	5.657	.017	1.887	1.118	3.185
Mother in work when cohort member was 16 (Not working)	Working	-.864	.244	12.561	.000	.421	.261	.680
Any qualifications at age 29 (No)	Yes	-.989	.265	13.923	.000	.372	.221	.625
Self rating of teamwork skills (Poor/don't have this skill)	Good/fair	-1.585	.496	10.195	.001	.205	.078	.542
GHQ-12 score at age 29 (<4)	4+	.786	.259	9.181	.002	2.194	1.320	3.647

Number of cases= 3,679; Nagelkerke's $R^2 = 0.09$; -2LL=650.672

7.6 Conclusions

7.6.1 Main points

Before discussing the chapter findings in-depth, it would be appropriate to address the four propositions set out in the introduction.

1. *How did the youth labour market in Britain change nationally and locally in Britain between 1986 and 2006 and what are the implications for the 'collapsed labour market' thesis?*

While the British youth labour market changed profoundly over the last 20-25 years, geographical and skill-based disadvantage persisted. Rising student employment rates and expansion of post-secondary education meant that for the most qualified young adults the adaption process has largely been successful. Almost half of young adults had A-levels or above by 2006. For young adults not in full-time education, fortunes have been more mixed. Labour market opportunity declined everywhere for unqualified young adults not in full-time education. Those with basic qualifications (below A-levels) living in the Conurbations and the Rest of Britain saw their employment rates narrow but not match those in the South & East of England (SEEE). The youth labour market for Greater London seems especially challenging with employment rates for young adults NFTE declining even for those with high level qualifications. Consistent with earlier evidence presented by Erdem and Glyn (2001), the collapsed labour market remains a reality for the unqualified and of relevance for those with basic qualifications outside of the SEEE.

2. *Did the national generosity of IB for young adults increase in absolute and/or relative terms between 1981 and 2001?*

The incapacity benefit received by most young adults (Income Support with a Disability Premium) saw its value decline slightly in real terms between 1981 and 2001. There was a modest rise in the absolute value of Incapacity Benefit and (of more direct relevance to young

adults) in Severe Disability Allowance. Relative to wages, the value of these benefits declined over time. Of more importance perhaps was the consistently higher value of Incapacity Benefits relative to unemployment benefits.

3. *Did the experience of the benefits system vary between economic clusters and counties?*

Analysis of off-flows from long-term young adult IB or JSA claimants suggest benefits system outcomes vary by both economic cluster and county. In particular, young adults exiting Job Seeker's Allowance in the Coalfields & Industrial Legacy areas or Conurbations are more likely to be cycled onto other working-age benefits than those in Prospering Britain or Rural & Coastal Britain, while young adults leaving IB in the Conurbations are more likely to be cycled onto other benefits than those in other clusters, especially Rural & Coastal Britain. There are some interesting local differences including mixed effects for Greater London and poorer than expected outcomes for young adults leaving benefits in Strathclyde region. National benefit rules may be less effective, on their own, at addressing these differences unless attention is paid to local differences.

4. *Were there any associations between likelihood of claiming IB as a young adult and family factors (parental employment, social class, family fragmentation) at age 16?*

All three family factors are associated with likelihood of claiming IB at age 29. There is some evidence that paternal employment status at age 16 combines with area of residence and local labour market conditions to change the risk of claiming IB as a young adult, with those living in older industrial Britain or in a high unemployment area in 1986 with a non-employed father most at risk. On the other hand, the impact of other family factors on likelihood of claiming IB, such family fragmentation or social class, may be overwhelmed by place and local labour market conditions in the Coalfields & Industrial Legacy areas and Conurbations or counties with a high unemployment rate in 1986.

5. *What structural, family and individual factors were most strongly associated with likelihood of claiming IB at age 29?*

A high GHQ-12 score, maternal employment status at age 16 and lack of formal qualifications were most strongly associated with claiming IB at age 29. Poor self-rated team-working skills played a subsidiary role. Personal experience of unemployment by age 26 or living in older industrial Britain or a high unemployment county at age 16 also increased risk, though their impact was weaker still. Problem drug misuse is likely to have been indirectly associated, through its contribution alongside unemployment to common mental health problems.

7.6.2 Discussion

A combination of structural, family and individual level factors are likely to have played a role in the increased numbers of young adults claiming IB over the last 20 years. At an *individual level*, lack of formal qualifications, poor self-assessed teamwork skills and common mental health problems would appear to be most dominant factors. On a practical level it is plausible that lack of teamwork skills stems from a lack of work experience. There is also a broad literature on the links between involuntarily unemployment, poverty and mental health problems such as depression and anxiety (West and Sweeting, 1996; Hammarstrom and Janlert, 2002), a point reinforced by the evidence assembled in Chapter 6. The story here might therefore be that young adults with low skills found it more difficult to establish themselves in the labour market, failed to develop work experience and were also at greater risk of mental health problems. Since problematic drug use and experience of unemployment were also significantly associated with high GHQ-12 scores, improving the transition to the labour market for the low-skilled is likely to have positive consequences for young adults' mental health.

As shown in Figure 7.4 – 7.6, geography was crucial here: young adults with lower level qualifications are likely to have fared better if they lived in the Shires of Southern and Eastern England than if they lived in Merseyside. Young adult's prospects cannot be separated out entirely from local labour market conditions. Nor can young adults be considered merely as atomised individuals. At a *family* level, mother's employment status when the cohort member was 16 emerged as an important factor. This could be interpreted in a number of ways. At its most prosaic, the inclusion of both social class and father's employment status in the model might confound each other, given the losses of male manual employment discussed in Chapter 5. Alternatively, it might be that mother's employment status is a more effective proxy for cumulative (dis)advantage. Couples tend to be composed of people with similar (labour market) characteristics; labour market change has tended to favour mothers with older children whose partners were already in work, while women whose partners were not in employment would not have found it worthwhile to seek work during this period because of benefit rules (Arrowsmith, 2004; Berthoud, 2007; Hutton, 1996). Moreover, the low employment rates of lone parents (and associated socio-economic disadvantage) may also be reflected in the model. While it cannot be definitively stated that some of this new cohort were the children of men who became detached from the labour market in the 1980s, this evidence provides some support for this idea. Note, though, that the date at which parental employment status was measured (1986) pre-dates the growth in the working-age IB caseload. A third possibility is that highlighted by Baron et al (2007) where having a working mother was associated with a more negative attitude towards claiming benefits.

It is interesting that it was the measure of place (cluster) rather than labour market demand measure (claimant unemployment) that emerged as marginally stronger in increasing risk of claiming IB among young adults. Of course in the Coalfields and Industrial Legacy areas, lack of employment opportunities also remain a problem, but this might hint that there were factors *over and above* labour market demand at work. Although this chapter has placed labour market weaknesses at the heart of these changes, the actual chain of events is likely to have been subtler than difficult labour market adjustment triggering epidemics of 'diseases of despair' among young adults, a view supported by recent research. Of eleven European regions that experienced particularly traumatic deindustrialisation in the last thirty years,

rising mortality in 15-44 year olds was seen only in the British regions. The rise was most marked in the West of Scotland and less so on Merseyside and Swansea and the South Wales Valleys (Walsh et al, 2008). Remaining with Merseyside, despite its long-term economic decline, a study of suicide across Britain found its level of deaths from this cause to be lower than expected, opening the way for speculation about 'protective' factors (Dorling and Gunnell, 2003). While there are limits to equating mortality with morbidity, these examples show that the same dose of economic dislocation can deliver quite different health outcomes for their young adults, depending on where they live.

An important limitation of incorporating these 'place' measures into the model is that they take no account of migration. Chapter 5 has already demonstrated the scale of out-migration from the Conurbations over the period, while previous authors have amply shown the loss of working-age population in the coalfield communities (Beatty, Fothergill and Powell, 2007). Given other research into the healthy worker effect, it is reasonable to argue that those who left were often better equipped in terms of resources (health, skills etc.) and the change of location may have further enhanced the position of their families. Conversely those who remained are likely to have possessed fewer resources, leading to a degree of concentrated spatial disadvantage. Information on cohort member's county of residence in the 1990s may also provide a more accurate reflection of the true impact of place – and whether families protected themselves through migration.

Further research may also be required to unpick the truth behind the stronger 'cycling' effects seen in older industrial Britain in general and Strathclyde in particular. A further limitation (and one that has occurred throughout this thesis) is the lack of insight it provides on sickness-related economic inactivity (SREI) in Greater London. Young adults NFTE in the capital faced a deteriorating labour market at all skill levels – so why was the growth in SREI among this age group far less steep than elsewhere? Some of the answer may lie in London's better health (relative to its levels of deprivation) alluded to in Chapter 4. Equally the West of Scotland, with its peculiarly worse health compared to other post-industrial parts of Britain, may confer uniquely 'health destroying' aspects to its young adult population.

Turning to welfare regime effects, although ever unemployed (1996) was significant, its Wald statistic was the lowest of the variables included in the model. Welfare regime effects might, therefore, be a second-order priority. This does not mean they should be neglected; rather the debate is more over how young adults can best be prevented from becoming detached from the labour market in the first place. Both 'push' effects and 'pull' effects in the welfare system are likely to have played a role in increasing the caseload of young adults on IB. Personalised conditionality and a simplified benefits system have the potential to address perverse incentives, but unless spatial differences are taken into account they may disappoint expectations. The full implications of this will be discussed in the final chapter.

Finally, what this analysis does suggest is that persistent inequalities in educational attainment and spatial differences in labour market demand proved very damaging to the life chances of some young adults. This puts families and not just individuals at the centre of the changing composition of sickness-related economic inactivity in Britain. In the final chapter, an attempt will be made to reconcile the findings identified so far in this thesis, and to offer some implications this might have for labour market and public health policy.

Chapter 8 Conclusions

"When you contemplate such ugliness as this, there are two questions that strike you. First, is it inevitable? Secondly, does it matter?"

(Orwell, The Road to Wigan Pier, 1937: 99)

8.1 Introduction

Over the last thirty years, working-age sickness-related economic inactivity in Britain has increased dramatically. In May 2009, 2.3m working-age people were claiming long-term Incapacity Benefits: fewer than 650,000 were doing so in March 1979. This thesis has used a range of methods to describe and account for this phenomenon. Chapters 4-7 explored the issue across three dimensions: space (in the counties and economic clusters), people (men, women and young adults) and time (between 1981 and 2006). This chapter takes a more expansive view, outlining the original contribution to knowledge made and drawing together key findings. It also discusses the limitations of this thesis and offers some possible areas for future research. Finally, the chapter discusses some implications for regional policy, public health and the benefits system.

8.2 What this thesis adds – and its limitations

8.2.1 Contribution

This thesis has made three original contributions to knowledge on the growth of working-age sickness-related economic inactivity (SREI) in Britain. First, this thesis has contributed to theory by describing and accounting for young adult SREI. This was achieved through the novel exploitation of existing datasets: for example, identifying Incapacity Benefit claimants in the APMS and BCS70. Much of the existing literature on this subject concentrates on prime-age (and more especially, older prime age adults) who became detached from the labour market because of health reasons. Until the recent studies by Beatty et al (2009) and Kemp and Davidson (2009), the emphasis was also on males (though see Molho (1991) for

an early exception). The larger numbers involved with these groups mean that it was reasonable to prioritise them. However, similar forces – a mixture of low skills, residence in counties with lower labour market demand and poorer population health – also affected growth in young adult SREI. The value here is to provide a reminder that economic conditions and policy decisions at a particular point in time can affect a far wider group than those immediately involved. This is not a problem that will disappear of its own accord as the ex-miners, steel workers and shipyard workers retire.

While young adults claiming IB are similar to older claimants in their educational attainment, their immediate desire to work and their geographical concentration, they are also distinct in a number of ways. On the positive side of the ledger, their time on benefits is shorter than older claimants and they are more optimistic about their prospects working in the future. More challenging perhaps are their heterogeneous reasons for claiming, with more claimants with substance misuse problems (especially young men) and with caring responsibilities (especially young women). Unlike older claimants, they were also at greater risk from a combination of family and labour market disadvantage: those who started their careers in the 1960s, for example, may have had parents who experienced high unemployment in the 1930s but entered the labour force themselves during a period of high demand. Young adults who were 16 in the mid-1980s, living in older industrial areas, were more likely to experience both prolonged parental worklessness and more limited opportunities for those not in full-time education. They also reached early adulthood as drug misuse, especially opiates, began to spread geographically across Britain (Parker et al, 1988). For this age group, this implies that investing in drug treatment programmes and childcare, for example, would prove a useful complement to general action on jobs, skills and health inequalities.

Second, this thesis has created point estimates of the extent of working-age SREI for 64 British counties in 1981, 1991 and 2001. Many authors have described the regional and local variation in SREI across Britain in the early 21st century (Beatty and Fothergill, 2005; McVicar, 2006; Sissons, 2009). Many have also described long-term national trends in working-age SREI over the last 25-30 years (Disney and Webb, 1991; Lonsdale, 1993; McVicar, 2008). The approach in this study is a useful complement to such studies,

illustrating the widening geographic disparity in SREI rates – not just between the South and East of England and everywhere else but also between places with a similar economic history and urban form, for example Lancashire and Derbyshire or Greater Manchester and Merseyside. Exploring local changes in SREI in the 1980s and 1990s is also a useful addition to studies looking at trends in this measure of labour market detachment since 2000 (Webster et al, 2010).

Creating these local estimates of SREI from Census data also allowed the 'hidden unemployment' theory to be tested directly. The results broadly support the view that long-term sickness became a form of disguised unemployment in Britain, though they also provide a reminder that spatial differences in health remain acute. Local labour market opportunities and skills became more strongly associated with SREI rates between 1981 and 2001. That it was more than a pure job destruction effect can be seen by the relative importance of growth in service-sector employment in mitigating withdrawal into SREI (see Chapter 5). IB's role in disguising unemployment can be seen by the association between local replacement ratios and SREI in Chapter 4: non-existent in 1981 but exerting a weak but statistically significant effect in 1991 and 2001. However, objective measures of health remained as strongly associated with SREI for men and actually strengthened for women.

Third, the modified labour market accounts technique contributes to current methods for describing labour market dynamics. As shown in Chapter 5, this allows net change in economic participation to be unpacked and withdrawal into SREI to be viewed alongside change in other types of economic inactivity. This approach reinforces the emerging view that SREI was not just a problem affecting men. Indeed, women gaining the new jobs created were more likely to be the partners of men already in work and tended to have different characteristics from women flowing into SREI (Gregg and Wadsworth, 2001; Berthoud, 2007). Showing adjustment in Prospering Britain alongside those areas more badly affected by SREI shows that it was a national problem and the consequences of unbalanced spatial growth. While withdrawal into SREI was a safety valve everywhere, the suggestion is that if employment growth had been stronger in the Conurbations and Coalfield & Industrial Legacy

areas, Prospering Britain would not have had to accommodate such large migration flows and local residents could have benefitted more from its jobs growth.

8.2.2 Key Findings

This section addresses the broad research questions set out in the introduction to this thesis. In Britain, the prevalence of working-age SREI increased from less than 2% to almost 6% between 1981 and 2001. In absolute terms, this represented a rise of nearly 1.4m people. Similar trends in the relative prevalence for young adults, though of a lesser absolute magnitude, are outlined in Chapter 6. The proportion of young adults claiming long-term Incapacity Benefits, doubled from less than 1 in 100 in 1981 to 1 in every 50 in 2006. For both age groups, the steepest increases were seen between the late 1980s and mid-1990s. Geographically, the greatest increases (in relative and absolute terms) were seen in the Conurbations and Coalfields and Industrial Legacy areas, with far shallower rises in Greater London and Prospering Britain. The trajectory of SREI in the counties of Rural and Coastal Britain closely tracked the GB average. At a county level, the smallest increases were seen in South East England (Surrey, Oxfordshire, Berkshire, Hertfordshire and Buckinghamshire) and Wiltshire. The largest increases were seen in North-East England (Cleveland, Tyne & Wear and Durham), Welsh coalfields (Dyfed, Mid Glamorgan-Gwent and West Glamorgan) and the Conurbations of Strathclyde and Merseyside.

Spatial inequalities in the scale of SREI widened over time, both between economic clusters and within them. For example, SREI rates in the Conurbations were less than 1 percentage point higher than Prospering Britain in 1981 but this gap had increased to 4.1 percentage points by 2001. Only in the late 1990s did this polarisation begin to be reversed, with falls in SREI in Older Industrial Britain and rises in other areas. There is also some evidence that the prevalence of SREI became relatively more pronounced in the Conurbations compared to the Coalfields and Industrial Legacy areas, and in Greater London relative to Prospering Britain.

Worklessness in general and SREI in particular, can be understood as partly reflecting an imbalance of employment opportunities, both spatial and skills mismatch – for men, women and young adults. There were particular shortfalls in general demand, skewed towards the unskilled, those seeking manual employment and men seeking full-time work in the North East of England, Merseyside, the Valleys of South Wales and West Central Scotland. Working-age adults in the Conurbations, Industrial Legacy areas and Greater London exiting IB were less likely to find work and more likely to move onto another benefit than their counterparts in Prospering Britain or Rural Britain. Young adults participating in the New Deal were also more likely to be cycled onto Incapacity Benefits if they lived in the Conurbations or Coalfields or Industrial Legacy areas. Strathclyde in particular has a poor record in terms of positive leaver destinations, which may need further research to explain. The importance of local conditions appears to be partly borne out by recent evidence, suggesting that the reduction in caseloads was attributable more to improving job opportunities than to tweaking of the benefits system (Webster, 2010).

Growth in sickness-related economic inactivity in Britain can be attributed in large part to shifts in labour market demand that were particularly concentrated in time and place. In quantitative terms, large numbers of full-time male jobs were shed in production (manufacturing, mining and energy) industries: the uneven spatial concentration of these jobs meant that the coalfields, industrial towns and conurbations were especially affected. But these changes did not simply lead to a one-off job destruction effect, with older miners or shipyard workers being displaced into SREI. Rather, weaker growth of service sector employment to replace job losses in traditional sectors meant that problems of demand persisted in some parts of the country until the mid-point of the first decade of the 21st century. Out-migration in theory should have eased jobs competition: but in practice, since it was the better skilled (whose prospects were always less affected by geography) who were more likely to leave (Drinkwater and Blackaby, 2004), this left the large imbalances between supply and demand at the bottom of the labour market untouched. While labour markets can recover from economic trauma, this process is not guaranteed, the pace of recovery is not predictable and some places can still suffer shortfalls in demand years later.

For the local labour markets of Prospering Britain, the picture was more favourable, but with some important caveats. Stronger growth of non-industrial employment (and to a lesser degree, less reliance on industrial employment at the start of the study period) contributed to lower rates of withdrawal into SREI. These gains were, however, partly offset by substantial in-migration from other parts of Britain, in particular from the Conurbations. This migration is likely to have had a stimulus effect to the local economies of Prospering Britain but a more mixed impact on labour market competition. Although the majority of internal migrants were highly skilled, some – perhaps as many as a fifth – had routine or semi-routine work histories and were likely to be competing against the less skilled of Prospering Britain. Smaller reductions in unemployment than might otherwise have been observed were the result.

Greater London's position is more unusual. 'Job density' demand for labour was very high in 1981 and 2001; health was better than expected given levels of poverty; and the capital has a very high proportion of working-age adults educated to degree level of above. However, absolute jobs density did not increase between 1981 and 2001, while employment rates for disadvantaged groups – such as the low-skilled and people with health problems – was little better than in the Conurbations and Coalfield and Industrial Legacy areas. Competition for jobs at all levels of the labour market (as measured by the U:V ratio) appears to be fierce, especially for elementary occupations. Employment rates for young adults not in full-time education *at all skill levels* deteriorated over time, though the depth of collapse was most pronounced for those with no qualifications. Outcomes for those leaving Incapacity Benefits or the New Deal for Young People Gateway were also among the poorest in Britain. These issues expressed themselves in relatively high rates of claimant unemployment in Greater London, and less SREI than might be expected.

The evolution of SREI can also be understood as both a consequence and a contributor to generalised polarisation in Britain. This was felt both at the level of the family and geographically (Dunford, 1995; Gregg and Wadsworth, 2001; Dorling et al, 2007; Government Equalities Office, 2010). The similar characteristics of partners and spouses (where they live, what kinds of job they do) meant that some women gained while others lost

out, though differences in the growth of female labour market participation were less driven by the expansion of local employment opportunities. Young adults became more dependent on family resources, during a period when economic change made families' capacity to provide that support much more uneven. For young adults in weaker labour markets, a raised risk of early unemployment had additional long-term consequences for their mental health and prospects: age by itself did not protect them. Spatially, the counterpoint to the difficult adjustment seen in older industrial Britain and for traditional male employment everywhere were gains in service sector employment, increased demand for white collar and female part-time labour and relative improvements in the employment base of the counties in the South and East of England, plus some rural areas and North-East and East-Central Scotland. Stronger local economies and better health are likely to reinforce each other, reducing both the push and the pull into SREI: the reverse was the case in the Conurbations and Coalfields and Industrial Legacy areas.

As with the rest of this thesis, there is a clear spatial dimension to the health aspects of SREI, with worse objective health and poorer labour market outcomes for those with health problems marked in the Scottish counties and the Conurbations. Objective health in the West of Scotland (especially in the Strathclyde region) is worst of all, even when compared to the unfavourable position of the large English Conurbations such as Greater Manchester and Merseyside, a point confirmed by recent research (Walsh et al, 2010). Indeed, this leaves open the possibility that Strathclyde's jobs deficit (despite less severe shocks to its economy than Merseyside say) may have been driven by the 'drag' of relatively worse health. As highlighted elsewhere (Suhrcke et al, 2007) economic development and health are bi-directional: they feed off each other.

A clear illustration of this interaction is the growing contribution of mental health problems to SREI in Britain. More difficult economic conditions may not directly increase the incidence of mental health problems (such as anxiety, depression or bad nerves) in the general population. However, they make it more likely that people with such health problems will claim Incapacity Benefits (Benitez-Silva et al, 2009). In addition, for some sub-groups of the population – particularly young, unskilled adults – the relationship may have been

more direct. Unemployment and 'work for the dole' schemes are associated with increased risk of depression and parasuicide among young men in particular (Dorling, 2009). Lack of employment opportunities for young adults not in full-time education may also have contributed to growing drug and alcohol misuse. This is likely to have occurred by increasing *demand* – through greater deprivation and family stress – and increasing *supply*, as employment in drug markets came to be viewed as a viable alternative to the stigma and low income associated with claiming benefits (Shaw et al, 2007). There is also a dynamic and complex interaction between inequality, alcohol misuse and mental health (Friedli, 2009). Alcohol-related health problems among all ages and social classes in Britain rose during the 1990s (Sheron et al, 2010). These too may also have made a contribution to rising SREI.

Looking at 'displacement' effects in more detail, they appear to vary by gender, at least outside of Greater London and Rural and Coastal Britain. For men, there is no evidence of displacement by women returners, but some evidence of displacement onto SREI by male in-commuters, though the effect was smaller compared to weaker employment growth and demographic change. For women, there is no evidence of displacement by female in-commuters, but some (limited and weak) evidence of displacement onto SREI by women returners. Evidence of direct displacement onto SREI by migration is much more limited. Indeed, rates of withdrawal into working-age sickness-related economic inactivity tended to be lower in counties with higher rates of in-migration. Indirect displacement onto SREI through migration cannot be ruled out, though the relative impact is likely to have been stronger in Prospering Britain. A plausible mechanism for this might be that some of the low-skilled or long-term unemployed with health problems in these labour markets were pushed further back in the jobs queue by migrants, and ultimately onto SREI.

On the available evidence, the benefits system played an intermediary role in driving the growth of SREI in Britain. However, direct changes to the administration of or generosity of Incapacity Benefits (IB) had a marginal effect. With the value of IB falling relative to wages and remaining flat (with the partial exception of Severe Disability Allowance) in absolute terms, pull effects onto IB were limited. Instead the focus should be on the impact of reforms

to the unemployment benefits (UB) system, with insufficient attention being paid to the specific labour market conditions of the jobless.

Ever more punitive rules attached to unemployment benefits may also have temporarily boosted inflows to IB from those on the dole in the late 1980s and possibly the late 1990s (Webster, 2005; Manning, 2009). Changes to the benefits system affected men most directly but women were also affected, with parental non-employment also increasing future likelihood of claiming IB for young adults. While some reforms (such as the introduction of the All-Work Test, Personal Capability Assessment or Pathways to Work) were successful at increasing outflows and reducing inflows (Blyth, 2006) though this is only part of the story. Compared to UB, IB provided a better protection against poverty, discouraging existing claimants from risking a move closer to the labour market to seek work. This made sense in an era of persistently weak demand and limited opportunities for the less skilled and less healthy, especially compared with the immediate post-war period (Hatton and Boyer, 2005; Erdem and Glyn, 2001).

8.2.3 Responding to the propositions

In Chapter 3, an extensive set of set of propositions were derived in order to understand SREI across time, place and between population sub-groups. This section summarises the findings of this thesis against each of these key propositions.

Proposition 1: There is a contemporary, negative association between local labour market demand and SREI.

There is some support for this proposition. A significant negative association was found between SREI and jobs density in 2001 for both men and women (section 4.2.3). Multivariate analyses, in sections 4.6.3.2 and 4.6.1.2, also supports this view. Finally,

sections 4.2.2 provides weak support for this proposition, showing that in general, local labour markets with high U:V ratios (weaker demand) tend to be those with high levels of SREI. However, this comes with an important caveat: Greater London remains an outlier, since it has high U:V ratios (indicating weaker demand) but low levels of SREI.

Proposition 2: The association between local labour market demand and SREI holds across different groups.

Again, there is some support for this proposition. A significant association (section 4.2.3) was found between SREI and jobs density in 2001 for both men and women. Section 6.2.4 shows a positive association between IB rates among 16-24 year olds and 25-64 year olds. Indirect support for the proposition is provided by analysis of trends in employment among young adults not in full-time education (NFTE). Section 7.2.2 shows continued variation in employment rates among young adults NFTE across space. The same section show employment rates among young adults NFTE vary by geography for those with no or low qualifications.

Proposition 3: The association between local labour market demand and SREI was either not present or was weaker at earlier times.

Initial support for this proposition is provided by section 4.2.3, which suggest the association between SREI and jobs density increased between 1981 and 2001. Stronger evidence is supplied by section 4.6.3.2, which shows that jobs density was not significant in explaining the geographic distribution of SREI in 1981 and 1991 but had become so by 2001. The interaction between time and jobs density (in 4.6.1.2) provides further evidence for this, thought the evidence is stronger for men than for women.

Proposition 4: The change in demand was related to change in SREI.

The labour market accounts constructed for men and women (section 5.2.2) provide evidence that rate of withdrawal into SREI was stronger where net job creation was weaker, supporting this proposition. However, unpicking the components of demand suggest that this was not a simple 'job destruction' effect. Section 5.2.5 provide very weak evidence of an association between losses of industrial employment and growth in SREI ($p<0.10$). Much more plausible is the link between weaker growth of non-industrial employment and SREI. The same tables show a much stronger and significant ($p<0.01$) association between these variables.

Proposition 5: Changes in SREI were associated with the generosity (in absolute or relative terms) of Incapacity Benefits.

There is no evidence to support this proposition (section 4.3.1). The absolute value of Incapacity Benefits (IB) remained almost unchanged over time and there is a lack of clear association between the national replacement ratio and short-term IB caseload. Finally, the value of IB relative to unemployment remained broadly unchanged until 1995 (a period during which the short-term IB caseload first fell then rose). The value of IB relative to unemployment benefits then increased steadily, but alongside a falling short-term IB caseload, the reverse of what might be expected if simple incentive effects were at work.

Proposition 6: Changes in SREI were associated with changes in the rules around claiming IB.

Here the evidence is ambiguous. The proportion of examined claims was falling between 1987 and 1994, alongside growth in the Incapacity Benefits caseload (section 4.3.2), but it is difficult to disentangle cause from effect. In addition, the point at which the IB caseload started to rise pre-dates the start of the decline in the proportion of examined claims.

Proposition 7: Employment opportunities for benefit leavers vary by geography.

Both survey-based and administrative data provide some support for this proposition (section 4.3.3). Likelihood of leaving IB for employment varies significantly by economic cluster. There is some evidence that this also holds for conurbations, a higher likelihood of benefit leavers in Greater Manchester moving into work compared to those in Strathclyde region. A similar pattern is evident for young adults claiming long-term JSA (section 7.3.3) whose prospects of moving on to claim IB vary substantially by economic cluster. There is also an indication that the interaction of local wages with the benefits system plays a role, given the significant association between SREI and the local 'replacement ratios'(section 4.3.4).

Proposition 8: Local incentives to claim IB relative to unemployment benefits were either not present or were weaker at earlier times.

Evidence for this is weak and more convincing for women than for men. Simple bivariate analysis (section 4.3.4) show the association was not significant in 1981 but had become so in 1991 and 2001. However, extending the analysis to multivariate analysis shows a modest strengthening in the explanatory power of 'local replacement ratios' for men but a stronger strengthening in the relative importance of this variable for women (section 4.6.1.2). The pooled analysis failed to provide compelling evidence of interaction effects between the replacement ratio and time (section 4.6.3.2).

Proposition 9: Individuals with a given level of employability should face the same employment prospects across different places.

There is little evidence to support this proposition. Section 4.4.1 shows the variation in employment rates of working-age adults with no qualifications.

Proposition 10: Growth in SREI can be partly attributed to 'displacement' by more employable groups, such as migrants, women returners and commuters.

There is little evidence to support the idea that IB claimants are being displaced in large number by international migrants. Section 4.4.4 shows a weakly negative association between IB rates and international migration: if anything, migrants would seem more likely to locate in labour markets with a lower percentage of the working-age population claiming Incapacity Benefits. Gender is important when considering displacement by commuters or female returners. There is no evidence that the growth in male SREI was more pronounced where female labour market participation grew more strongly. However, there is some, albeit weaker, evidence that some female SREI might be attributable to competition from female returners (section 5.2.5). In terms of commuting, there is some evidence that male commuting played a role in the growth of male SREI but no such association was found for female commuting.

Proposition 11: The growth in SREI cannot be attributed to a general worsening in health, but persistent (and new) inequalities in health may have played a role.

This proposition appears to be supported by the evidence. Section 4.5.2 shows declining mortality in all five economic clusters over time, but lack of reduction in the relative gap in mortality. Section 4.5.3 shows persistent association between mortality and SREI at county level at all three points in time, with a strengthening relationship for women. This is reinforced by section 4.6.1.2 (and section 4.6.3.2) which show that persistent health inequalities for men and women were a significant explanatory factor in the level of SREI in all three Census years.

Proposition 12: The mental health problems faced by IB claimants (especially the young) are overstated.

There is little evidence to support this proposition. Survey based and administrative measures suggest similar prevalence of mental health problems among young IB claimants. Section 6.4.2 shows young adult IB claimants have a significantly higher prevalence of mental health problems (GHQ-12 score 2+) than non-claimants but not JSA claimants. Young adult IB claimants have significantly higher prevalence of any neurotic disorders than JSA claimants in same age group. An additional finding from this might be that the mental health problems faced by the young unemployed are also substantial, even if not quite of the same magnitude as those faced by young adult IB claimants.

Proposition 13: Poorer attitudes towards work and learning, along with substance misuse, are the main explanations for growth in young adult SREI, even after other factors are taken into account.

The cross-sectional work provides some support for this proposition – but once other factors are taken into account, problem drug misuse and attitudes towards work and learning are not significant. More important factors are mental health problems, history of unemployment and whether a cohort member's mother was working when the young adult was aged 16, formal qualifications and team-work skills (section 7.5).

8.2.4 Limitations and areas for further research

This thesis has a number of limitations. While this section cannot cover them all, the most obvious – use of geography and the triangulation approach – deserve closer scrutiny. From a more positive perspective, this section will also outline some possible areas for future work that emerged from the research process.

In geographic terms, while this thesis provides a useful narrative on trends in SREI in Prospering Britain, the Conurbations and Coalfields and Industrial Legacy areas, it is less effective in unpicking change in SREI in Greater London and Rural and Coastal Britain. The data support the view, discussed at length elsewhere, that Greater London has a highly polarised labour market (Buck, 1990; May et al, 2007). But without more detailed analysis, they are less able to account for why adjustment in the Greater London labour market failed to manifest as SREI. For Greater London, this finding may be partially explained by demographics. The capital has a highly diverse population: in 2010 more than one-third of its working-age population were from an ethnic minority, compared to one in eight in the Conurbations for example (Annual Population Survey, Jul 2009-Jun 2010). Research suggests that uptake of Incapacity Benefits among adult men with a long-term limiting health problem is significantly lower among BME groups, compared to the white population (Salway et al, 2007). The capital also has a significant foreign national population. This group, too, is much less likely to claim IB, at least in part due to entitlement rules. In 2008, less than 0.5% of overseas nationals with a National Insurance Number were claiming Incapacity Benefits[28], compared to 6.7%[29] of the working-age British population as a whole. It is also likely to be partly explained by the 'London effect' on health alluded to in Chapter 4, with the capital having relatively better health than might be expected given its levels of deprivation (Whynes, 2009).

Similarly, the 'weak demand' account works less well in Rural and Coastal Britain, though the growth of SREI was close to the national average in those counties, so studying more extreme cases perhaps yields more useful insights. Interpreting the results for rural areas is more challenging. However, it may partly reflect low benefits take-up and under-reporting of mental health problems in rural areas. Both issues appear linked to the greater visibility (and stigma) associated with health problems and claiming benefits in small, isolated rural communities, as well as the geographical distance from services (Scottish Executive, 2003; Lobley et al, 2004). Some might view the stronger association of low wages relative to earnings with SREI in older industrial areas (see Chapter 4) as evidence of more negative

[28] http://research.dwp.gov.uk/asd/asd1/tabtools/nino_allocations_aug09.pdf

[29] Nomisweb data for May 2008.

attitudes to work there. However, this should be balanced against the reality of low wages especially in Rural & Coastal areas, which are likely to reflect low productivity and in-work poverty and may not be the most effective way of protecting health. Unchanged or rising IB claims in the last decade in less industrial parts of Britain offer some warnings on this.

A further spatial criticism is that the choice of geographies was selected to reinforce a particular view: that just as HM Treasury pick their 'places' to do battle, this thesis has done the same. For instance, the method by which particular counties were assigned to the five 'economic clusters' might be thought of as rather subjective, an important point given the arguments advanced are firmly rooted in emphasising differences between places. For Greater London in particular, it may have been more appropriate to choose boundaries based on a functional Greater London labour market, embracing many of those counties currently described as belonging in the orbit of Prospering Britain (De Goei et al, 2008). But this would have also concealed the strength of local labour markets around Outer London, especially in Cambridgeshire, Oxfordshire and Buckinghamshire, as well as reducing the number of observed cases that might be reasonably considered. The lack of a straightforward account for the growth of SREI in Rural and Coastal Britain has already been touched upon. It could be also argued that the spatial units chosen (counties) were too large to adequately describe the changes seen outside of urban Britain, concealing the high pockets of SREI found in coastal towns such as Barrow-in-Furness, Hastings or Kingston-upon-Hull. More generally, with at most 64 counties being observed, the small 'N' problem (where the number of cases being considered is limited, reducing the power of any findings) is also apparent: this might weaken this thesis's findings. All three criticisms are legitimate, especially as different facets of local labour market operate at different scales and most choices of spatial unit represent an imperfect compromise.

Moving to limitations of the triangulation strategy, the problem here may be less in the theory as in the implementation. Employing such a range of datasets may provide readers with a series of vignettes about how sickness-related economic inactivity affected particular geographies, was influenced by various factors and its effect on young adults – but with less of a coherent sense of how these elements interacted as a whole. Particularly for young

adults, the actual numbers on which findings are based (for example, in the BCS70 or the Adult Psychiatric Morbidity Survey) are relatively small. The author acknowledges there are missing links in the chain of events proposed here. Some confidence might be taken from the consistency of key messages: variation in labour market demand across local labour markets, poorer health, skills and welfare outcomes in Older Industrial Britain, the similar proportion of IB claimants with mental health problems whether survey or administrative data is used. Nonetheless, future research may consider focusing on a single longitudinal dataset (such as the National Child Development Study or NCDS), incorporating appropriate geographic flags, to examine cause and effect of SREI on a single cohort. Larger numbers in the NCDS (given this would have an older cohort, born in 1958) would also boost the robustness of any findings.

The research presented here also suggests more scope to examine the extent and reasons behind the variation in spatial outcomes for benefit leavers. For example, the Joint Unemployment and Vacancies Operating System (JUVOS) data set might be interrogated to explore historic differences across the counties in diversions from unemployment benefits to Incapacity Benefits. It would also be useful for leaver destinations for Incapacity Benefits to be collected and published at a small spatial level, as it has been for Job Seeker's Allowance since 1998. The Work and Pensions Longitudinal Survey (a 100% count of all working-age claimants) make the technical feasibility of this more likely – but given the steep rises in open unemployment that will continue feeding through the system until 2011, it may have a low priority for the next few years. As discussed elsewhere, releasing routine data on IB on- and off-flows by claimant characteristics and geography would also be immensely helpful. Indeed, some of this work has already begun at the Scottish Observatory for Work & Health.

8.3 Policy Implications

The analysis presented here suggests that the precise nature of SREI and balance of appropriate remedies to tackle it will vary subtly from place to place – in parts of the South and East of England and Eastern Scotland, improving softer skills and addressing real and

severe health problems may be relatively more important; on Merseyside and Cleveland, dramatic improvements in formal qualifications and boosting general demand may take precedent; and in the West of Scotland, tackling an enduring health deficit and shortfalls in labour market demand for the less qualified may be most relevant. Nevertheless, there are also some more core lessons for policy that may prove beneficial.

8.3.1 Full Employment and a healthy labour market

The main policy lesson from this thesis is that without full employment, resources are wasted, the health of the workforce is damaged and the benefits system malfunctions. Although a tangible improvement in employment opportunities was seen in the older industrial parts from the late 1990s, the scale of the challenge remained daunting even before the financial crisis of 2008 and the current recession. The real level of unemployment in Britain (taking into account the 'hidden unemployed' on Incapacity Benefits) stood at 2.7m in January 2007 (Beatty, Fothergill, Gore and Powell, 2007). This section argues that a more imaginative approach, with full employment at its core, might contribute to better results for the economy, individuals and society.

Full employment is defined here as decent work for all those men and women of working-age who want it. 'Decent work' should allow workers to work the number of hours they desire to at a living wage, be freely chosen and not be precarious or temporary. It should be accompanied by social benefits such as childcare, social dialogue with employers and with hours that satisfy workers' preferences and be supported by a benefits system designed to protect those not in work from poverty. Unemployment durations should be short and temporary (Goldberg et al, 2006). On a practical level, the measurement of unemployment should be expanded to include those currently counted as inactive, perhaps adopting using the methodology favoured by Beatty et al (2007). The level of full employment should not be set in terms of the lowest level that is politically acceptable or will prevent inflation accelerating. Instead, following Beveridge, the aim should be the lowest level that is technically possible allowing for some frictional unemployment (Beveridge, 1944; Goldberg et al, 2006; Allen et al, 2007).

Full employment differs in many fundamental respects from the *full employability* approach preferred by the Treasury and DWP. Philosophically, full employment sees rights (to employment, to benefits) as intrinsic and has the state as employer of last resort. It also advocates redistribution through taxation and spending to alleviate the excesses of the market and to smooth out fluctuations in demand. Full employability sits within a framework with low inflation at its heart and where employment and growth are second-order objectives. Individuals' rights are contingent on their responsibilities to society – though the bargain is a very unequal one, with little obligation on employers or the state to provide jobs (Allen at al, 2006). While full employment rejects the notion of voluntary unemployment, full employability sees much of long-term unemployment as voluntary or due to deficits in basic skills, with the remedies in basic, soft skills training to equip people for entry level jobs and making unemployment less attractive by stricter means-testing of benefits (Allen et al, 2007; Rosen, 1995).

There are two main arguments against full employment: one philosophical and one practical. As argued by Hayek (1944), the first objection is that it would involve coercion and that people are better off freely choosing in a highly marketised society. But even Hayek acknowledges that competition does not reward or punish according to normative views about what is good but on the combination of individual ability and luck. In this process, almost equal weighting is assigned to fortune as to ability, judgement and foresight- and in any society, *"the opportunities open to the poor are much more restricted than those open to the rich"* (Hayek, 1944: 106). This inequality of opportunity stems mainly from private property so that chances depend on individual hard work and skill *and* on being born well. Measures to reduce inequality are justified if they do not destroy the competitive nature of society (Hayek, 1944: 106-7). A more even distribution of labour market demand would seem to fall into this category.

A second objection to redirecting demand is that it would promote inefficiency: at a macro level, as resources are used to support employment in places less favoured by the market

adding additional transport and relocation costs; and at a micro level, as the labour force is less productive than it would be without a 'guarantee' of employment (Hayek, 1944: 213-214). But the uneven distribution of demand also imposes inefficiencies. More prosperous areas may be prevented from reaching their potential through skill shortages, lack of affordable housing and suitable business premises and transport congestion (John, Musson and Tickell, 2002; Turok and Bailey, 2004). In those places with weaker demand, population loss may lead to the *''breaking up of families, destruction of communities and waste of social capital in the distressed areas"* (Beveridge, 1944: 25), as well as delaying recovery through loss of human capital. Lost economic potential to local and national economies represent a further opportunity cost. The ongoing financial costs of benefits payment (even if proposals for a single benefit system are enacted) are not insubstantial. Finally, there is a real risk that depressed parts of the country, without efforts to rebalance the economy, may become permanently dependent on subsidies from more affluent areas (Rowthorn, 2000).

Reviving a commitment to full employment would be more successful under favourable national economic conditions and would, given the scale of the jobs 'shortfalls', provide only a partial solution. Therefore, it would also be appropriate to consider implementing a much more radical approach to address geographical disparities in skills. Providing a guarantee of training and education places to working-age adults up to NVQ Level 3 would help to reduce spatial variation in employment rates (Erdem and Glyn, 2001; McIntosh, 2004). This policy was introduced for 19-25 year olds in Autumn 2008 and it would seem natural to extend this to the over 25s.[30] Since regions with higher levels of human capital also have higher rates of new firm foundation (Ashcroft, Plotnikova, and Ritchie, 2007) this may also have a positive medium to long-term impact on the employment base of lagging local labour markets.

8.3.2 Benefits system reform

Reforms to the benefits system also have their place. Since the mid-1990s, successive UK governments have introduced a number of reforms to IB, aimed at cutting inflows and increasing outflows. These included the roll out of 'Pathways to Work', which provided

[30] A pilot scheme is currently running in South East England and the East Midlands.

extra payment for IB claimants moving into work for their first 12-months coupled with a mix of sanctions and personalised support. The latest round of reforms was the introduction of Employment and Support Allowance (ESA) in 2008. New claimants assessed as capable of work in the short to medium term are paid the 'employment' component (at levels more generous than JSA). Those with more severe conditions are given the 'support' component, with less stringent conditions and higher levels of payment (Kemp, 2008). Such measures can make a useful contribution to addressing the problem, but not in isolation. By themselves, they do little to reduce incentives to move from unemployment benefits to IB, especially as conditionality around JSA also becomes tighter (Sainsbury and Stanley, 2007). There is increasing interest in phasing in a 'single working-age benefit' to address this (Freud, 2007; Sainsbury and Stanley, 2007). However, even if introduced, the proposed value of such a benefit would be close to current JSA levels, which would do little to alleviate poverty or address the needs of benefit claimants (Kenway, 2009).

Nor do measures focused solely on the benefits system provide much of substance to tackle underlying issues of skills, health and labour market demand outlined above. A more consistent approach would be to pursue a single benefits system in the context of full employment. Consideration might also be given to increasing the level of unemployment benefit and linking payments to earnings to protect health. The last point is likely to be politically challenging, given the low levels of sympathy among the British public for the unemployed (Taylor-Gooby and Martin, 2009). Experience suggests that greater conditionality and means-testing, by themselves, have limited capacity to move benefit claimants into work (Manning, 2009; Dryburgh, 2010). Indeed, the most recent evidence on the roll-out of Employment and Support Allowance suggests history may be in danger of repeating itself, with the Scottish CAB arguing that:

> *"the Government has been successful in taking claimants off sickness benefits, and in some cases out of the benefits system altogether. However, there is very little evidence to suggest that claimants and former claimants have been helped back into meaningful employment" (Dryburgh, 2010:45).*

Articulating the public health consequences of different benefits regimes (and their likely impact on achieving *sustainable* reductions in benefits caseloads) might be helpful.

8.3.3 Public health

Tackling SREI is likely to require a combination of public health and labour market measures (including the benefits system) that complement and reinforce each other in keeping people healthy and the non-employed close to the labour market. Official policy has criticised for drawing too heavily on the medical model of disability (Grover and Piggott, 2007). The growth of SREI is a clear example where of where reducing health inequalities at every stage of the social gradient, and throughout peoples' lives, could make a serious impact. The Marmot Review (2010) sets out a comprehensive framework to achieve this. This includes a broad emphasis on decent work and full employment but also advocates improved support for families and young children, a 'minimum income' to support living standards and reducing the social gradient in health outcomes related to smoking, alcohol and obesity. Specific to mental health, Friedli (2009) sets out a multi-strand approach for its improvement. For those of working-age, this includes supporting efforts to improve pay, working conditions and job security; making the business case for improving job control, social support and addressing the imbalance between effort and reward; and early referral to workplace based support to avoid exit through mental health problems (Friedli, 2009). Policies to support full employment and a more supportive benefit system may provide some of the impetus here, but not all.

At the level of the firm, more support for line managers to manage mental health issues among their employees (including the knowledge and capacity to refer to condition management programmes), flexible working practices and more information about low-cost counselling services may be beneficial (The Shaw Trust, 2006). As part of her review of the health of the working-age population of the UK, Black (2008) also provides a number of pertinent recommendations for employers. Small to medium enterprises should have access to a consultancy service, funded by Government but led and run by the best in the private and voluntary sector, to help them implement occupational health policies and sickness-absence management policies. Larger firms should measure (and report on) the health and well-being of their workforce. All firms, large or small, can also contribute to the mental health of the

working population by ensuring that jobs provide a degree of autonomy and control for workers, fair rewards, and good quality line management.

8.4 Concluding remarks

SREI matters a great deal. Perhaps a million working-age adults in Britain might find a place in the labour market if demand was spread more evenly around the country, if the benefits system helped people to stay healthy and if a more radical agenda was taken to improve skills (Fothergill and Wilson, 2007; Bambra, 2010). The current recession and structural deficit means that national economic recovery will have to take precedence before the 'local dimension' can be considered. But it should not be sidelined once growth in underway. Although changes in the benefits system make it less likely that future or current economic adjustment problems play out in exactly the same way as the past, many of the fundamental conditions - unequal employment growth and disparity in skills and health – that underlaid detachment in the 1980s and 1990s still exist. As such, full employment is unlikely to be achieved solely through improving selective aspects of employability and more intensive conditionality in the benefits system.

Just before the end of the Second World War, William Beveridge wrote:

> *"a State which fails, in respect of many millions of individuals, to ensure them any opportunity of service and earning according to their powers or the possibility of a life free from the indignities and inquisitions of relief, is a State which has failed in its primary duty"* (Beveridge, 1944: p. 252)

The growth of SREI in Britain suggests that in important aspects, the State has failed in its duty for the last thirty years. Reducing levels of sickness-related economic inactivity and addressing its underlying causes, would make the arguments for a welfare state based on rights and responsibilities much more credible.

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Appendix 1: Ratio of mid-year population estimates to Census count (working-age population) for British counties: 1981, 1991 and 2001

County	1981	1991	2001
Avon	1.04	1.03	1.01
Bedfordshire	1.01	1.01	1.01
Berkshire	1.05	1.02	1.01
Borders	1.04	1.00	1.00
Buckinghamshire	1.01	1.00	1.01
Cambridgeshire	1.04	1.04	1.01
Central	1.02	1.02	1.00
Cheshire	1.01	1.00	1.00
Cleveland	1.00	1.01	1.03
Clwyd-Gwynedd	1.03	1.00	1.00
Cornwall, Isles	1.02	1.01	1.00
Cumbria	1.02	1.00	1.00
Derbyshire	1.01	1.01	1.01
Devon	1.05	1.03	1.00
Dorset	1.04	1.02	1.00
Dumfries & Galloway	1.02	0.99	1.00
Durham	1.02	1.01	1.00
Dyfed	1.04	1.01	1.00
East Sussex	1.04	1.03	1.01
Essex	1.01	1.01	1.00
Fife	1.05	1.02	1.00
Gloucestershire	1.03	1.01	1.00
Grampian	1.05	1.03	1.00
Greater London	1.03	1.03	1.03
Greater Manchester	1.01	1.03	1.02
Hampshire	1.04	1.02	1.00
Hereford and Worcester	1.01	0.99	1.00
Hertfordshire	1.02	1.01	1.00
Highland	1.04	1.00	1.00
Humberside	1.01	1.02	1.01
Isle of Wight	1.02	1.01	1.00
Kent	1.03	1.01	1.00
Lancashire	1.01	1.01	1.00
Leicestershire	1.09	1.09	1.01
Lincolnshire	0.92	0.91	1.00
Lothian	1.04	1.04	1.00
Merseyside	1.01	1.03	1.01
Mid Glamorgan-Gwent	1.00	0.99	1.01
Norfolk	1.02	1.01	1.00
North Yorkshire	1.04	1.02	1.00
Northamptonshire	1.01	1.01	1.00
Northumberland	1.01	1.00	1.00
Nottinghamshire	1.02	1.03	1.00
Orkney Islands	1.03	1.07	1.00
Oxfordshire	1.10	1.07	1.00
Powys	1.04	1.01	1.00

Appendix 1: Ratio of mid-year population estimates to Census count (working-age population) for British counties: 1981, 1991 and 2001 (cont.)

County	1981	1991	2001
Shetland Islands	1.23	1.02	0.99
Shropshire	1.03	1.01	1.00
Somerset	1.03	1.01	0.97
South Glamorgan	1.07	1.07	1.01
South Yorkshire	1.02	1.02	1.00
Staffordshire	1.01	1.01	1.00
Strathclyde	1.02	1.02	1.00
Suffolk	1.02	1.02	1.00
Surrey	1.02	1.00	1.00
Tayside	1.04	1.02	1.00
Tyne & Wear	1.02	1.03	1.01
Warwickshire	1.02	1.00	1.00
West Glamorgan	1.02	1.03	1.00
West Midlands	1.02	1.03	1.01
West Sussex	1.03	1.01	1.00
West Yorkshire	1.02	1.03	1.00
Western Isles	1.03	1.07	0.99
Wiltshire	1.03	1.01	1.00
Great Britain	**1.02**	**1.02**	**1.01**

Appendix 2: Percentage of working-age people (aged 16-59/64) permanently sick and disabled, British counties by Standard Statistical Region: 1981, 1991 and 2001

Standard Statistical Region	County	1981	1991	2001
East Anglia	Cambridgeshire	1.2	2.6	3.5
	Norfolk	1.7	3.4	5.2
	Suffolk	1.4	2.6	4.1
East Midlands	Derbyshire	1.8	3.9	6.0
	Leicestershire	1.4	3.3	4.3
	Lincolnshire	1.9	4.0	5.7
	Northamptonshire	1.3	2.7	4.0
	Nottinghamshire	1.9	4.5	6.5
Greater London	Greater London	1.4	3.5	4.5
North	Cleveland	2.5	7.1	9.0
	Cumbria	1.9	4.1	6.7
	Durham	3.3	8.0	10.1
	Northumberland	3.1	5.5	7.5
	Tyne & Wear	3.0	7.4	9.6
North West	Cheshire	2.0	4.6	5.8
	Greater Manchester	2.5	6.2	8.0
	Lancashire	2.7	6.0	7.4
	Merseyside	2.6	7.5	10.3
Rest of South East	Bedfordshire	1.2	2.6	3.6
	Berkshire	0.9	2.0	2.5
	Buckinghamshire	0.9	1.9	2.8
	East Sussex	1.9	3.5	5.0
	Essex	1.5	2.9	4.2
	Hampshire	1.3	2.6	3.5
	Hertfordshire	1.3	2.4	2.9
	Isle of Wight	1.9	3.9	6.1
	Kent	1.5	2.9	4.3
	Oxfordshire	1.2	2.1	2.4
	Surrey	1.4	2.0	2.3
	West Sussex	1.3	2.5	3.4
South West	Avon	1.7	3.0	4.2
	Cornwall, Isles	2.2	4.1	6.3
	Devon	2.1	3.6	5.6
	Dorset	1.7	3.1	4.6
	Gloucestershire	1.4	2.7	3.8
	Somerset	1.6	3.0	4.3
	Wiltshire	1.4	2.4	3.3

Source: Censuses of Population, 1981, 1991 and 2001.

Appendix 2: Percentage of working-age people (aged 16-59/64) permanently sick and disabled, British counties by Standard Statistical Region: 1981, 1991 and 2001 (cont.)

Standard Statistical Region	County	1981	1991	2001
West Midlands	Hereford and Worcester	1.5	3.0	4.2
	Shropshire	1.7	3.7	5.1
	Staffordshire	2.0	4.5	6.3
	Warwickshire	1.4	3.3	4.2
	West Midlands (Met. County)	1.9	4.7	6.4
Yorkshire and the Humber	Humberside	2.0	4.1	5.8
	North Yorkshire	1.7	3.2	4.0
	South Yorkshire	2.6	6.2	7.9
	West Yorkshire	2.2	4.6	6.1
Wales	Clwyd-Gwynedd	2.6	5.9	7.8
	Dyfed	3.2	7.4	9.7
	Mid Glamorgan-Gwent	4.1	9.7	11.5
	Powys	2.5	5.2	6.3
	South Glamorgan	2.7	5.6	6.4
	West Glamorgan	3.5	9.5	11.5
Scotland	Borders	1.6	3.1	4.8
	Central	2.4	6.4	7.7
	Dumfries & Galloway	1.9	4.7	7.1
	Fife	2.0	5.3	6.7
	Grampian	1.7	3.4	4.6
	Highland	1.6	3.4	5.7
	Lothian	1.8	4.3	5.8
	Orkney Islands	1.8	3.4	4.6
	Shetland Islands	1.3	2.5	3.8
	Strathclyde	2.7	8.1	9.7
	Tayside	2.1	5.1	6.4
	Western Isles	2.5	4.5	5.9
Great Britain	**ALL**	1.9	4.4	5.7

Source: Censuses of Population, 1981, 1991 and 2001.

Appendix 3: Estimated vacancies across Great Britain, by region: 2005/06

Region	Employers Surveys	Job Centre Plus Administrative data	Ratio of JCP Vacancies to Employers Survey Vacancies
North West England	83,598	85,715	**1.03**
South East England	99,161	56,070	**0.57**
London	87,444	31,920	**0.37**
West Midlands	56,256	50,344	**0.89**
Yorkshire & the Humber	64,422	59,403	**0.92**
Eastern	57,056	39,932	**0.70**
South West	62,474	51,410	**0.82**
East Midlands	39,727	40,912	**1.03**
North East	23,767	30,045	**1.26**
Wales	37,875	28,880	**0.76**
Scotland	76,700	45,023	**0.59**
Great Britain	**688,480**	**519,654**	**0.75**

**ONS data for UK, grossed up from GB survey data*

Sources: National Employers Skills Survey 2005: Main Report; Skills in Scotland 2006; Future Skills Wales 2005 Sector Skills Survey Main Report; DWP Live unfilled vacancies (August 2005)

Appendix 4: Components for Labour Market Accounts

Component	Definitions	Source
Loss of industrial employment	Working-age (16-59/64) industrial employment in 2001 minus working-age (16-59/64) industrial employment in 1981. Industrial employment defined as per Table 3.5.	Census of Population, Special Workplace Statistics.
Increase in non-industrial employment	Working-age (16-59/64) non-industrial employment in 2001 minus working-age (16-59/64) non-industrial employment in 1981. Non-industrial employment defined as per Table 3.5.	Census of Population
Natural increase workforce	Net change in total working-age population 1981-2001 (Working-age population (16-59/64) in 2001 minus working-age population in 1981) minus net in-migration.	Census of Population; 1981-2000 NHS Register.
Net in-migration	In-migration plus out-migration, for all men aged 15-64 and women aged 15-59, December of each year, 1981-2000.	1981-2000 NHS Register
In-commuting	The residual in the accounts.	
Exits from other forms of economic inactivity	Number of working-age (16-59/64) economically inactive people describing themselves as students, retired or other in 2001 minus those in these categories in 1981.	Census of Population.
Withdrawal into SREI	Number of working-age (16-59/64) adults SREI in 2001 minus this figure in 1981. SREI defined in Census years as in Table 3.5.	Census of Population.
Change in unemployment	Number of working-age (16-59/64) adults unemployed in 2001 minus this figure in 1981. Unemployed defined in Census years as in Table 3.5.	Census of Population.

Appendix 5: Maintaining Census continuity through time: definitions used

	1981	1991	2001
Working-age population	Usual resident population Men aged 16-64 and women aged 16-59	Usual resident population Men aged 16-64 and women aged 16-59	Usual resident population Men aged 16-64 and women aged 16-59
Unemployed	**All those:** Seeking work; Prevented by temporary sickness from seeking work	**All those:** On a government employment or training scheme; Unemployed and looking for a job; Wanting a job but prevented from looking by holiday or temporary sickness	**All those:** Not in employment, is available to start work in the next 2 weeks and has either looked for work in the last 4 weeks or is waiting to start a new job
Permanently sick/disabled	**All those:** Permanently sick or disabled	**All those:** Unable to work because of long-term sickness or disability	**All those:** Permanently sick/disabled
Students (economically inactive)	**All those:** At school or full-time student at an educational establishment not provided by an employer	**All those:** At school or in other full time education	**All those:** Student (excluding students also unemployed or in employment)
Retired	**All those:** Wholly retired from employment	**All those:** Retired from paid work	**All those:** Retired
Other economically inactive	**All those:** Housewife; Other, please specify	**All those:** Looking after the home or family; Other, please specify	**All those:** Looking after home/family; None of the above

Appendix 5: Maintaining Census continuity through time: definitions used (cont.)

	1981	1991	2001
Total workplace employment	**All those:** People of working-age who are in employment and whose usual place of work is in the area, regardless of where they live, with workplace unstated 'prorated'. 10% sample grossed up by a factor of 10.	**All those:** People of working-age who were employed/self-employed and whose usual place of work is in the area, regardless of where they live. 10% sample grossed up by a factor of 10.	**All those:** People of working-age who are in employment and whose usual place of work is in the area, regardless of where they live. 100% sample. People with no fixed workplace were treated the same as people who work mainly at or from home and are counted as working in their area of residence.
Industrial employment	**Workplace employment in the following categories:** Energy and Water Supply Industries, Energy and Water Supply Industries, Energy and Water Supply Industries, Other Manufacturing Industries.	**Workplace employment in the following categories:** Energy and Water Supply Industries, Extraction of Minerals and Ores other then Fuels, Metal Goods, Engineering and Vehicle Industries, Other Manufacturing Industries.	**Workplace employment in the following categories:** Mining and quarrying, manufacturing, and electricity, gas and water supply. Determined by the response to the question asking for a description of the business of the person's employer (or own business if self-employed). Responses coded to a modified version of the UK SIC of Economic Activities.
Non-industrial employment	**Workplace employment in the following categories:** Agriculture, Forestry and Fishing, Construction, Distribution, Hotels and Catering: repairs, Transport and Communication, Banking, Finance, Insurance, Business Services and Leasing, Other Services.	**Workplace employment in the following categories:** Agriculture, Forestry and Fishing, Construction, Distribution, Hotels and Catering: repairs, Transport and Communication, Banking, Finance, Insurance, Business Services and Leasing, Other Services, Industry not stated or inadequately stated.	**Workplace employment in the following categories:** Agriculture, hunting, forestry and fishing, Construction, Wholesale and retail trade, repairs, Hotels and restaurants, Transport, storage and communications, Financial intermediation, real estate, renting and business activities, Public administration and defence, social security, Education, Health and social work, Other.

Appendix 6: Maintaining geographical continuity through time: areas used

County name	1981-1995 County/region	1996-2006 Local/unitary authority
Avon	Avon	Bath and North East Somerset, Bristol, City of, North Somerset, South Gloucestershire
Bedfordshire	Bedfordshire	Bedford, Luton, Mid Bedfordshire, South Bedfordshire
Berkshire	Berkshire	Bracknell Forest, Reading, Slough, West Berkshire, Windsor and Maidenhead, Wokingham
Borders	Borders	Scottish Borders
Buckinghamshire	Buckinghamshire	Aylesbury Vale, Chiltern, Milton Keynes, South Bucks, Wycombe
Cambridgeshire	Cambridgeshire	Cambridge, East Cambridgeshire, Fenland, Huntingdonshire, Peterborough, South Cambridgeshire
Central	Central	Clackmannanshire, Falkirk, Stirling
Cheshire	Cheshire	Chester, Congleton, Crewe and Nantwich, Ellesmere Port & Neston, Halton, Macclesfield, Vale Royal, Warrington
Cleveland	Cleveland	Hartlepool, Middlesbrough, Redcar and Cleveland, Stockton-on-Tees
Clwyd-Gwynedd	Clwyd; Gwynedd	Conwy, Denbighshire, Flintshire, Wrexham, Gwynedd Isle of Anglesey
Cornwall, Isles	Cornwall, Isles	Caradon, Carrick, Isles of Scilly, Kerrier, North Cornwall Penwith, Restormel
Cumbria	Cumbria	Allerdale, Barrow-in-Furness, Carlisle, Copeland, Eden South Lakeland
Derbyshire	Derbyshire	Amber Valley, Bolsover, Chesterfield, Derby, Derbyshire Dales, Erewash, High Peak, North East Derbyshire, South Derbyshire
Devon	Devon	East Devon, Exeter, Mid Devon, North Devon, Plymouth, South Hams, Teignbridge, Torbay, Torridge, West Devon
Dorset	Dorset	Bournemouth, Christchurch, East Dorset, North Dorset, Poole, Purbeck, West Dorset, Weymouth and Portland
Dumfries & Galloway	Dumfries & Galloway	Dumfries and Galloway
Durham	Durham	Chester-le-Street, Darlington, Derwentside, Durham, Easington, Sedgefield, Teesdale, Wear Valley
Dyfed	Dyfed	Carmarthenshire, Ceredigion, Pembrokeshire

Appendix 6: Maintaining geographical continuity through time: areas used (cont.)

County name	1981-1995 County/region	1996-2006 Local/unitary authority
East Sussex	East Sussex	Brighton and Hove. Eastbourne, Hastings, Lewes, Rother, Wealden
Essex	Essex	Basildon, Braintree, Brentwood, Castle Point, Chelmsford, Colchester, Epping Forest, Harlow, Maldon, Rochford, Southend-on-Sea, Tendring, Thurrock, Uttlesford
Fife	Fife	Fife
Gloucestershire	Gloucestershire	Cheltenham, Cotswold, Forest of Dean, Gloucester, Stroud Tewkesbury
Grampian	Grampian	Aberdeen, Aberdeenshire, Moray
Greater London	Inner London Outer London	City of London, Camden, Hackney, Hammersmith and Fulham, Haringey, Islington, Kensington and Chelsea, Lambeth, Lewisham, Newham, Southwark, Tower Hamlets, Wandsworth, Westminster, City of, Barking and Dagenham, Barnet, Bexley, Brent, Bromley, Croydon, Ealing, Enfield, Greenwich, Harrow, Havering, Hillingdon, Hounslow, Kingston-upon-Thames, Merton, Redbridge, Richmond-upon-Thames, Sutton, Waltham Forest
Greater Manchester	Greater Manchester	Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, Wigan
Hampshire	Hampshire	Basingstoke and Deane, East Hampshire, Eastleigh, Fareham, Gosport, Hart, Havant, New Forest, Portsmouth, Rushmoor, Southampton, Test Valley, Winchester
Hereford and Worcester	Hereford and Worcester	Bromsgrove, Herefordshire, County of, Malvern Hills, Redditch, Worcester, Wychavon. Wyre Forest
Hertfordshire	Hertfordshire	Broxbourne, Dacorum, East Hertfordshire, Hertsmere, North Hertfordshire, St Albans, Stevenage, Three Rivers, Watford, Welwyn Hatfield
Highland	Highland	Highland
Humberside	Humberside	East Riding of Yorkshire, Kingston upon Hull, City of, North East Lincolnshire, North Lincolnshire
Isle of Wight	Isle of Wight	Isle of Wight

Appendix 6: Maintaining geographical continuity through time: areas used (cont.)

County name	1981-1995 County/region	1996-2006 Local/unitary authority
Kent	Kent	Ashford, Canterbury, Dartford, Dover, Gravesham, Maidstone, Medway, Sevenoaks, Shepway, Swale, Thanet, Tonbridge and Malling, Tunbridge Wells
Lanacashire	Lanacashire	Blackburn with Darwen, Blackpool, Burnley, Chorley, Fylde, Hyndburn, Lancaster, Pendle, Preston, Ribble Valley, Rossendale, South Ribble, West Lancashire, Wyre
Leicestershire	Leicestershire	Blaby, Charnwood, Harborough, Hinckley and Bosworth, Leicester, Melton, North West Leicestershire, Oadby and Wigston, Rutland
Lincolnshire	Lincolnshire	Boston, East Lindsey, Lincoln, North Kesteven, South Holland, South Kesteven, West Lindsey
Lothian	Lothian	East Lothian, Edinburgh, Mid Lothian, West Lothian
Merseyside	Merseyside	Knowsley, Liverpool, Sefton, St. Helens, Wirral
Mid Glamorgan-Gwent	Mid Glamorgan; Gwent	Bridgend, Caerphilly, Merthyr Tydfil, Rhondda, Cynon, Taff, Blaenau Gwent, Monmouthshire, Newport, Torfaen
Norfolk	Norfolk	Breckland, Broadland, Great Yarmouth, King's Lynn and West Norfolk, North Norfolk, Norwich, South Norfolk
North Yorkshire	North Yorkshire	Craven, Hambleton, Harrogate, Richmondshire, Ryedale, Scarborough, Selby, York
Northamptonshire	Northamptonshire	Corby, Daventry, East Northamptonshire, Kettering, Northampton, South Northamptonshire, Wellingborough
Northumberland	Northumberland	Alnwick, Berwick-upon-Tweed, Blyth Valley, Castle Morpeth, Tynedale, Wansbeck
Nottinghamshire	Nottinghamshire	Ashfield, Bassetlaw, Broxtowe, Gedling, Mansfield, Newark and Sherwood, Nottingham, Rushcliffe
Orkney Islands	Orkney Islands	Orkney Islands
Oxfordshire	Oxfordshire	Cherwell, Oxford, South Oxfordshire, Vale of White Horse, West Oxfordshire
Powys	Powys	Powys
Shetland Islands	Shetland Islands	Shetland Islands
Shropshire	Shropshire	Bridgnorth, North Shropshire, Oswestry, Shrewsbury and Atcham, South Shropshire, Telford and Wrekin

Appendix 6: Maintaining geographical continuity through time: areas used (cont.)

County name	1981-1995 County/region	1996-2006 Local/unitary authority
Somerset	Somerset	Mendip, Sedgemoor, South Somerset, Taunton Deane, West Somerset
South Glamorgan	South Glamorgan	Cardiff, The Vale of Glamorgan
South Yorkshire	South Yorkshire	Barnsley, Doncaster, Rotherham, Sheffield
Staffordshire	Staffordshire	Cannock Chase, East Staffordshire, Lichfield, Newcastle-under-Lyme, South Staffordshire, Stafford, Staffordshire Moorlands, Stoke-on-Trent, Tamworth
Strathclyde	Strathclyde	Argyll & Bute, East Ayrshire, East Dunbartonshire, East Renfrewshire, Glasgow, Inverclyde, North Ayrshire, North Lanarkshire, Renfrewshire, South Ayrshire, South Lanarkshire, West Dunbartonshire
Suffolk	Suffolk	Babergh, Forest Heath, Ipswich, Mid Suffolk, St Edmundsbury, Suffolk Coastal, Waveney
Surrey	Surrey	Elmbridge, Epsom and Ewell, Guildford, Mole Valley, Reigate and Banstead, Runnymede, Spelthorne, Surrey Heath, Tandridge, Waverley, Woking
Tayside	Tayside	Angus, Dundee, Perth & Kinross
Tyne & Wear	Tyne & Wear	Gateshead, Newcastle upon Tyne, North Tyneside, South Tyneside, Sunderland
Warwickshire	Warwickshire	North Warwickshire, Nuneaton and Bedworth, Rugby, Stratford-on-Avon, Warwick
West Glamorgan	West Glamorgan	Neath Port Talbot, Swansea
West Midlands	West Midlands	Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall, Wolverhampton
West Sussex	West Sussex	Adur, Arun, Chichester, Crawley, Horsham, Mid Sussex, Worthing
West Yorkshire	West Yorkshire	Bradford, Calderdale, Kirklees, Leeds, Wakefield
Western Isles	Western Isles	Eilean Siar
Wiltshire	Wiltshire	Kennet, North Wiltshire, Salisbury, Swindon, West Wiltshire

Appendix 7: BCS70 Structural, family and individual variables used in modelling IB claimant status at age 29

Factors	Variables used in modelling	Variables used from data-sets	Response coding
Structural	Cluster of residence in 1986	District health authority (1986)	Prospering Britain, Rural & Coastal Britain or Greater London (0), Conurbations or Coalfields & Industrial Legacy areas (1)
	Exposure to welfare regime	Ever unemployed (1996)	No (0), Yes (1)
	Claimant unemployment rate in cluster of residence 1986	District health authority (1986)	Low-medium (0), High (1)
Family	Father's social class	Father's social class: I, II, IIIn, IIIm, IV, V (1986)	Middle class (0), Working class (1)
	Father's employment status when respondent was 16	Present employment situation of father: regularly employed, casual/occasional work, other employment sit, unemployed, sick, looking after home, permanently sick, FT student, retired (1986)	Working (0), Not working (1)
	Mother's employment status when respondent was 16	Present employment situation of mother: regularly employed, casual/occasional work, other employment sit, unemployed, sick, looking after home, permanently sick, FT student, retired (1986)	Working (0), Not working (1)
	Natural father	Relationship of current father figure: natural father, other father figures, no father figure (1986)	Natural father (0), Not natural father or no father figure (1)
Individual	Formal qualifications	Derived highest level of qualification (1999/00)	No qualifications (0), any qualifications (1)
	Attitudes to work	Agreement with statement that 'any job is better than being unemployed': strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (1999/00)	Strongly agree/agree (1), other responses (0)
	Attitudes to learning	Agreement with statement that 'the effort of getting more qualifications is more trouble than it's worth': strongly agree, agree, neither agree nor disagree, disagree, strongly disagree (1999/00)	Strongly agree/agree (1), other responses (0)
	Team working skills	How good would you say you are at working in a team: good, fair, poor, don't have this skill?	Poor/don't have this skills (0), Good/fair (1)
	Communication skills	How good would you say you are at communication skills: good, fair, poor, don't have this skill?	Poor/don't have this skills (0), Good/fair (1)
	Problem solving skills	How good would you say you are at problem solving: good, fair, poor, don't have this skill?	Poor/don't have this skills (0), Good/fair (1)
	Common mental health problems	Both derived from GHQ score in self-completion sections: GHQ 12 score (1999/00)	GHQ 12 <4 (0), GHQ 12 4+ (1)
	Ever tried heroin, methadone, cocaine or crack?	Derived from self completion questions: have you ever tried..., no, yes not in last 12 months, yes in last 12 months (1999/00)	No, none of these (0), Yes, any of these (1)

Appendix 8: Explanatory factors in the growth of the young adult IB caseload in Britain: a first attempt

		Regression coefficient (B)	Standard error	Wald Statistic	Significance	EXP(B)
Cluster (Con or Coalfields & Industrial Legacy areas)	Pros. Britain, RCB or G. Lon	-0.125	0.381	0.743	0.108	0.882
Claimant unemployment 1986 (Low-Medium)	High	-0.067	0.4	0.867	0.028	0.935
Ever unemployed (No)	Yes	0.58	0.303	0.055	3.67	1.786
Father's social class (Middle class)	Working class	0.502	0.299	0.093	2.824	1.651
Father in work (No)	Yes	-0.178	0.456	0.697	0.152	0.837
Mother in work (No)	**Yes**	-0.626	0.296	0.034	4.487	0.535
No father (No)	Yes	0.107	0.423	0.8	0.064	1.113
Any qualifications (No)	**Yes**	-0.896	0.314	0.004	8.152	0.408
Any job better than unemployed (Disagree)	Agree	-0.423	0.28	0.131	2.28	0.655
Effort of getting more qualifications more trouble than it's work (Disagree)	Agree	-0.943	0.75	0.208	1.582	0.389
Team working skills (Poor/don't have this skill)	**Good/fair**	-1.52	0.629	0.016	5.842	0.219
Communication skills (Poor/don't have this skill)	Good/fair	-0.207	0.717	0.773	0.084	0.813
Problem solving skills (Poor/don't have this skill)	Good/fair	-0.697	0.614	0.257	1.287	0.498
GHQ 12 score: 1999/00 (<4)	**4+**	0.948	0.293	0.001	10.475	2.581
Ever tried heroin, methadone, cocaine or crack? (No)	Yes	-0.048	0.448	0.916	0.011	0.954

Number of cases=3,198; Nagelkerke's $R^2 = 0.098$; -2LL=513.014; LL Chi-squared=51.032.

Appendix 9: Explanatory factors in the growth of the young adult IB caseload in Britain: excluding those inactive for 'other' reasons

		Regression coefficient (B)	Standard error	Wald Statistic	Significance	EXP(B)
Cluster (Con or Coalfields & Industrial Legacy areas)	Pros. Britain, RCB or G. Lon	.067	.414	.871	.026	1.07
Claimant unemployment 1986 (Low-Medium)	High	.225	.425	.597	.280	1.25
Ever unemployed (No)	Yes	.583	.315	.064	3.419	1.79
Father's social class (Middle class)	Working class	.373	.307	.225	1.471	1.45
Father in work (No)	Yes	-.379	.471	.421	.647	.68
Mother in work (No)	**Yes**	-.524	.317	.099	2.730	.59
No father (No)	Yes	1.195	.759	.116	2.474	3.30
Any qualifications (No)	**Yes**	**-1.022**	**.327**	**.002**	**9.774**	**.36**
Any job better than unemployed (Disagree)	Agree	-.438	.294	.135	2.230	.65
Effort of getting more qualifications more trouble than it's work (Disagree)	Agree	-1.581	1.039	.128	2.317	.21
Team working skills (Poor/don't have this skill)	**Good/fair**	**-1.611**	**.648**	**.013**	**6.175**	**.20**
Communication skills (Poor/don't have this skill)	Good/fair	-.251	.729	.731	.118	.78
Problem solving skills (Poor/don't have this skill)	Good/fair	-.908	.631	.150	2.074	.40
GHQ 12 score: 1999/00 (<4)	**4+**	**.901**	**.309**	**.004**	**8.497**	**2.46**
Ever tried heroin, methadone, cocaine or crack? (No)	Yes	-.229	.491	.641	.217	.80

Number of cases=2,849; Nagelkerke's $R^2 = 0.11$; -2LL=459.325.